

***STANDARD  
SPECIFICATIONS  
for  
ROAD AND BRIDGE  
CONSTRUCTION***



**STATE OF NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION**

***July – 2006***

APPROVED: \_\_\_\_\_  
CHIEF ENGINEER

\_\_\_\_\_  
DATE



# ***PREFACE***

*This edition of the Standard Specifications for Road and Bridge Construction, State of New Hampshire, Department of Transportation, will be used for projects designed and bid in either English units or metric (SI). SI units will be shown capitalized on the computer generated estimates. Also mm<sup>2</sup>, m<sup>2</sup>, km<sup>2</sup>, cm<sup>3</sup>, and m<sup>3</sup> may also be written as mm2, m2, km2, cm3, and m3, respectively, due to typewriter, word processor, or printer limitations. The English unit is followed by the metric unit in parentheses. The units in the text are not equal, for example, 1 cubic yard does not equal 1 cubic meter.*

*A project using using English units will use the English references and a project metric units will use the metric references. The two systems are not equal and therefore, not interchangeable within a Contract.*

*Information which has been changed from the 2002 Standard Specifications is noted with vertical lines to show added or revised information and horizontal lines to show a deletion. These lines are located in the margin. The revision marks are intended to facilitate location of new material, but provide no guarantee, explicit or implicit, that text not highlighted has appeared in prior editions of the Standard Specifications.*

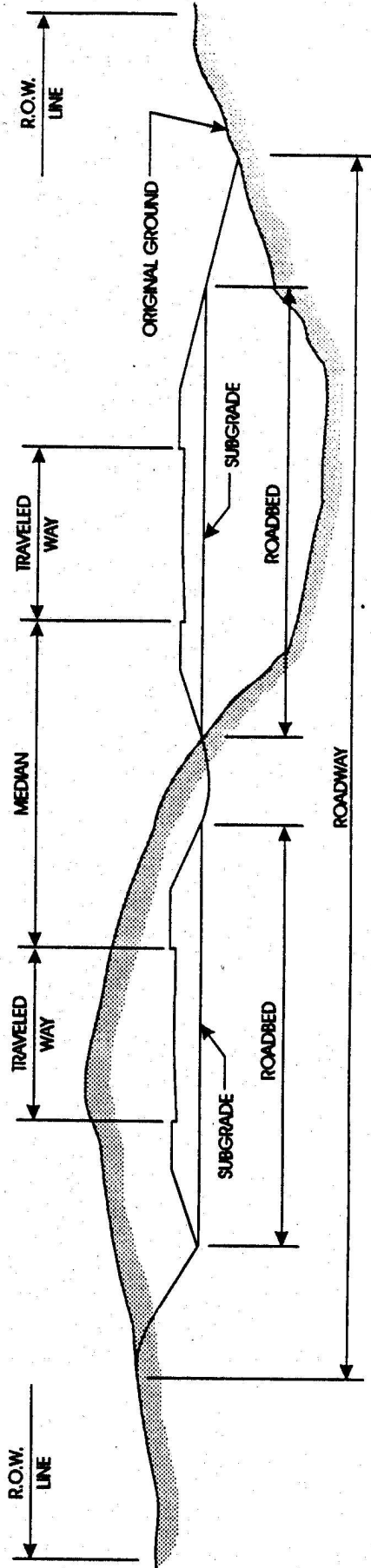
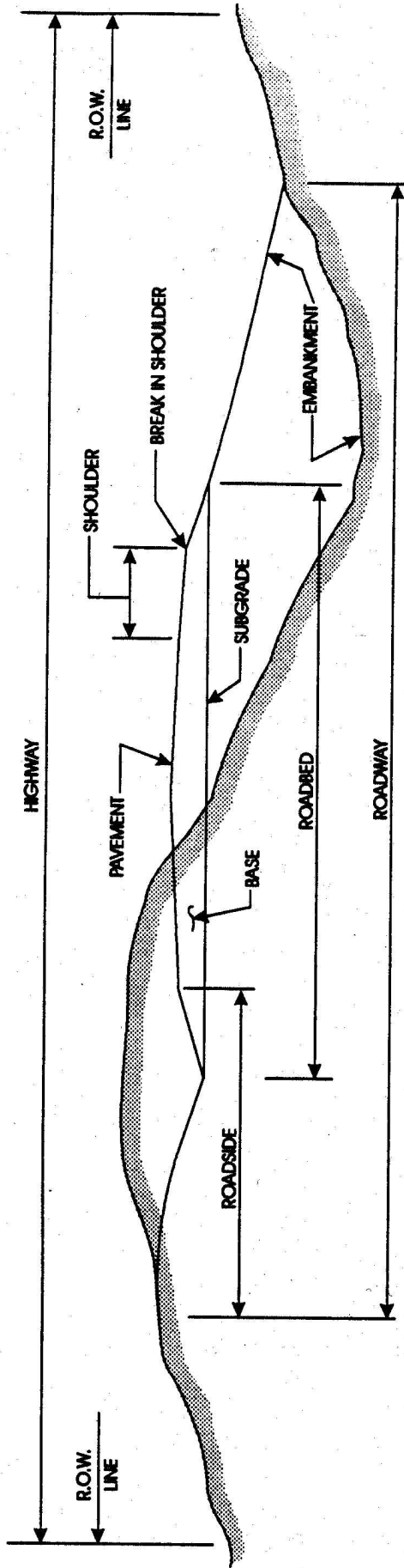
Supplemental Specifications to the 2006 Standard Specifications will be posted on the New Hampshire Department of Transportation website as they become available. Look in the Business Center at [www.nhdot.com](http://www.nhdot.com).



STANDARD CONVERSION TABLE – ENGLISH TO METRIC				
Symbol	To convert from	Multiply by	To determine	Symbol
<b><u>LENGTH</u></b>				
IN	inch	25.4	millimeters	mm
FT	feet	0.3048	meters	m
YD	yards	0.9144	meters	m
MI	miles	1.609344	kilometers	km
<b><u>AREA</u></b>				
SI	square inches	645.16	square millimeters	mm <sup>2</sup>
SF	square feet	0.09290304	square meters	m <sup>2</sup>
SY	square yards	0.83612736	square meters	m <sup>2</sup>
A	acres	0.4046856	hectares	ha
MI <sup>2</sup>	square miles	2.59	square kilometers	km <sup>2</sup>
<b><u>VOLUME</u></b>				
CI	cubic inches	16.387064	cubic centimeters	cm <sup>3</sup>
CF	cubic feet	0.0283168	cubic meters	m <sup>3</sup>
CY	cubic yards	0.764555	cubic meters	m <sup>3</sup>
GAL	gallons	3.78541	liters	L
OZ	fluid ounces	0.0295735	liters	L
MBM	thousand feet board	2.35974	cubic meters	m <sup>3</sup>
<b><u>MASS</u></b>				
LB	pounds	0.4535924	kilograms	kg
TON	short tons (2000 lbs)	0.9071848	metric tons	t
<b><u>PRESSURE AND STRESS</u></b>				
PSF	pounds per square foot	47.8803	pascals	Pa
PSI	pounds per square inch	6.89476	kilopascals	kPa
PSI	pounds per square inch	0.00689476	megapascals	Mpa
<b><u>DISCHARGE</u></b>				
CFS	cubic feet per second	0.02831	cubic meters per second	m <sup>3</sup> /s
<b><u>VELOCITY</u></b>				
FT/SEC	feet per second	0.3048	meters per second	m/s
<b><u>INTENSITY</u></b>				
IN/HR	inch per hour	25.4	millimeters per hour	mm/hr
<b><u>FORCE</u></b>				
LB	pound (force)	4.448222	newtons	N
<b><u>POWER</u></b>				
HP	horsepower	746.0	watts	W
<b><u>TEMPERATURE</u></b>				
°F	degrees Fahrenheit	5 X (°F – 32)/9	degrees Celsius	°C
<b><u>DENSITY</u></b>				
lb/ft <sup>3</sup>	pounds per cubic foot	16.01846	kilograms per cubic meter	kg/m <sup>3</sup>
<b><u>ACCELERATION</u></b>				
g	freefall, standard	9.807	meters per second squared	m/s <sup>2</sup>

TO CONVERT FROM METRIC TO ENGLISH, DIVIDE BY THE ABOVE CONVERSION FACTORS.





## ELEMENTS OF THE CROSS SECTION AS USED IN THESE SPECIFICATIONS

(SEE SECTION 101)





# TABLE OF CONTENTS

Section		Page
<b><u>DIVISION 100 - GENERAL PROVISIONS</u></b>		
101	DEFINITIONS AND TERMS	1
102	BIDDING REQUIREMENTS AND CONDITIONS	11
103	AWARD AND EXECUTION OF CONTRACT	15
104	SCOPE OF WORK	19
105	CONTROL OF THE WORK	27
106	CONTROL OF MATERIAL	38
107	LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC	58
108	PROSECUTION AND PROGRESS	68
109	MEASUREMENT AND PAYMENT	78
<b><u>DIVISION 200 - EARTHWORK</u></b>		
201	CLEARING AND GRUBBING	88
202	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	92
203	EXCAVATION AND EMBANKMENT	98
206	STRUCTURE EXCAVATION FOR PIPES & OTHER MINOR STRUCTURES	120
207	CHANNEL EXCAVATION	122
209	GRANULAR BACKFILL	123
211	VIBRATION MONITORING	125
214	FINE GRADING	128
<b><u>DIVISION 300 -- BASE COURSES</u></b>		
304	AGGREGATE BASE COURSE	130
306	RECLAIMED STABILIZED BASE	137
<b><u>DIVISION 400 - PAVEMENTS</u></b>		
401	PLANT MIX PAVEMENTS – GENERAL	140
403	HOT BITUMINOUS PAVEMENT	179
404	RECYCLED BITUMINOUS PAVEMENT	181
410	BITUMINOUS SURFACE TREATMENT	183
411	PLANT MIX SURFACE TREATMENT	186
413	HOT-POURED CRACK SEALANT	188
417	COLD PLANING BITUMINOUS SURFACES	190
<b><u>DIVISION 500 - STRUCTURES</u></b>		
501	TEMPORARY BRIDGE	192
502	REMOVAL OF EXISTING BRIDGE STRUCTURE	194

<b>Section</b>		<b>Page</b>
503	COFFERDAMS AND WATER DIVERSION STRUCTURES	195
504	BRIDGE EXCAVATION	198
506	SHEET PILING	201
508	STRUCTURAL FILL	202
510	BEARING PILES	205
511	PREPARATION FOR CONCRETE BRIDGE DECK REPAIRS	222
512	PREPARATION FOR CONCRETE REPAIRS	225
520	PORTLAND CEMENT CONCRETE	226
528	PRESTRESSED CONCRETE MEMBERS	275
530	WATERPROOFING CONCRETE SURFACES	295
534	WATER REPELLENT	296
536	EPOXY COATING FOR CONCRETE	298
537	CONCRETE SEALER	300
538	BARRIER MEMBRANE	301
541	WATERSTOPS	303
544	REINFORCING STEEL	304
547	SHEAR CONNECTORS	308
548	ELASTOMERIC BEARINGS	314
550	STRUCTURAL STEEL	315
556	PAINTING EXISTING STRUCTURAL STEEL	364
560	PREFABRICATED COMPRESSION SEAL EXPANSION JOINT	366
561	PREFABRICATED EXPANSION JOINT	368
562	ELASTOMERIC SEALANT	372
563	BRIDGE RAIL	374
565	BRIDGE APPROACH RAIL	377
566	ELASTOMERIC JOINT SEAL	378
568	STRUCTURAL TIMBER	380
570	STONE MASONRY	383
572	STONE WALL	387
582	SLOPE PAVING	391
583	RIPRAP	393
585	STONE FILL	394
586	PLACING EXCAVATED ROCK	396
587	KEYED STONE FILL	397
591	STRUCTURAL PLATE PIPES, PIPE-ARCHES, AND ARCHES	400
593	GEOTEXTILE	404
 <b><u>DIVISION 600 - INCIDENTAL CONSTRUCTION</u></b>		
603	CULVERTS AND STORM DRAINS	411
604	CATCH BASINS, DROP INLETS, AND MANHOLES	425

<b>Section</b>		<b>Page</b>
605	UNDERDRAINS	432
606	GUARDRAIL	437
607	FENCES	453
608	SIDEWALKS	458
609	CURBS	461
614	ELECTRICAL CONDUIT	466
615	TRAFFIC SIGNS	473
616	TRAFFIC SIGNALS	483
618	UNIFORMED OFFICERS AND FLAGGERS	498
619	MAINTENANCE OF TRAFFIC	501
621	DELINEATORS	508
622	MARKERS AND BOUNDS	510
624	RAILROAD PROTECTION	512
625	LIGHT POLE BASES	513
628	SAWED PAVEMENT	514
632	RETROREFLECTIVE PAVEMENT MARKINGS	515
641	LOAM	528
642	LIMESTONE	529
643	FERTILIZER FOR GRASSES	530
644	GRASS SEED	532
645	EROSION CONTROL	538
646	TURF ESTABLISHMENT	548
647	HUMUS	549
648	SOD	550
650	PLANTING - GENERAL	552
651	EVERGREEN TREES	564
S 652 AND 653	DECIDUOUS TREES	564
654	EVERGREEN SHRUBS	565
S 655 AND 656	DECIDUOUS SHRUBS	566
657	VINES AND GROUND COVERS	568
658	TRANSPLANTING PLANT MATERIAL	568
692	MOBILIZATION	569
693	TRAINING PROGRAMS	571
698	FIELD FACILITIES	574
699	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	583
 <b><u>DIVISION 700 - MATERIALS</u></b>		
702	BITUMINOUS MATERIALS	587
707	CEMENT MORTAR	589
708	PAINTS	591
711	PREFORMED RETROREFLECTIVE PAVEMENT MARKING TAPE	604
718	RETROREFLECTIVE SHEETING	612



## DIVISION 100 - GENERAL PROVISIONS

*SECTION 101 -- DEFINITIONS AND TERMS*

**101.01 General.** The titles and headings of the Sections, Subsections and Subparts herein are intended for convenience of reference and shall not be considered as having bearing on their interpretation.

When a publication is specified, it refers to the most recent date of issue, including final interim publications, prior to the date of receipt of bid for the Project unless the issue as of a specific date or year is provided for.

Wherever the following abbreviations, terms or pronouns are used in the Contract, the intent and meaning shall be interpreted as follows:

**101.02 Abbreviations:**

AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ARA	American Railway Association
AREA	American Railway Engineering Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood-Preservers' Association
AWWA	American Water Works Association
AWS	American Welding Society
CFR	Code of Federal Regulations
CGP	Construction General Permit
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards, General Services Administration
MUTCD	Manual on Uniform Traffic Control Devices
NEMA	National Electrical Manufacturers Association
NHDOT	The State of New Hampshire Department of Transportation
NPDES	National Pollutant Discharge Elimination system
OSHA	Occupational Safety and Health Administration
RSA	The New Hampshire Revised Statutes Annotated, 1955 together with all revisions amending same to date of invitation for bids
SAE	Society of Automotive Engineers
SSPC	Steel Structures Painting Council
UL	Underwriter's Laboratory

## SECTION 101

**101.03 Acceptance.** The formal written acceptance by the Commissioner of an entire Contract which has been completed in all respects in accordance with the Plans and Specifications and any modifications previously approved.

**101.04 Actual Cost.** The cost actually incurred by the Contractor in the performance of work. Actual costs include labor, material, actual ownership cost of equipment or invoiced rental rates, and administrative overhead.

**101.05 Addendum.** Contract revisions developed after advertisement and before opening Proposals.

**101.06 Advertisement.** A public announcement, inviting bids for work to be performed or materials to be furnished.

**101.07 Angle of Crossing.** The right or acute angle formed by the intersection of the centerline of the upper roadway with a line parallel to the face of the abutment of a bridge or with the centerline of a culvert.

**101.08 Approved Material.** 1. Material obtained from within the limits of the Project or from outside sources suitable for the intended use and approved by the Engineer. 2. Manufactured material approved by the Engineer for use in the work.

**101.09 Award.** The acceptance of a proposal by the Department pending Governor and Council approval.

**101.10 Base Course.** One or more layers of specified or selected material of designed thickness placed on a properly prepared subbase or subgrade to support a surface course.

**101.11 Bidder.** An individual, partnership, firm, corporation, or any combination thereof, or joint venture, submitting a Proposal.

**101.12 Bid Bond.** See Proposal Guaranty.

**101.13 Bid (Item Bid).** A price submitted by a Bidder for a contract pay item contained in the Proposal.

**101.14 Bid (Total).** Total dollar amount of the Proposal.

**101.15 Bid Documentation.** All writings, working papers, computer printouts, charts, and all other data compilation that contain or reflect information, data or calculations used by the Bidder to determine the bid Proposal submitted, including but not limited to material relating to the determination and application of:

- Equipment rates
- Overhead rates and related time schedules
- Labor rates
- Efficiency or productivity factors
- Arithmetic extensions
- Subcontractor and material supplier quotes

Any manuals standard to the industry that are used by the Bidder in determining the bid Proposal may be included in the bid documentation by reference and shall show the name and date of the publication and the Publisher.

The term "Bid Documentation" does not include documents provided by the Department for the Bidder's use in the preparation of the bid Proposal.

## SECTION 101

**101.16 Bid Schedule.** The prepared schedule included in the Proposal, containing the estimated quantities of pay items for which bid prices are invited.

**101.17 Bridge.** As provided by RSA 234:2, a structure having a clear span of 10 ft. (3.048 m) or more measured along the center line of the roadway at the elevation of the bridge seats, spanning a water course or other opening or obstruction.

**101.18 Calendar Day.** A day shown on the calendar.

**101.19 Cement.** Unless otherwise designated, this term will refer to Portland cement.

**101.20 Certificate of Compliance.** A document in the format prescribed in the Contract certifying that material(s) incorporated in the Work complies with all requirements and specifications under the Contract.

**101.21 Change Order.** An order covering changes in the plans or quantities or both, within the scope of the Contract, and establishing the basis of payment and time adjustments for the Work affected by the changes.

**101.22 Commissioner.** The Commissioner of The State of New Hampshire Department of Transportation.

**101.23 Complete in Place.** All work indicated to be performed as part of a contract item except as may be otherwise specified under the Method of Measurement or Basis of Payment.

**101.24 Completion (Project).** Completion of the Project occurs when the Contractor has completed all work required by the Contract and has satisfactorily executed and delivered to the Engineer all documents, certificates and proofs of compliance required by the Contract.

**101.25 Concrete.** Composite construction material primarily consisting of aggregate (usually sand and stone) and a binding material (usually asphalt or cementitious materials).

**101.26 Conduit.** Unless the connotation is to the contrary, a tube intended to carry electrical or other utilities.

**101.27 Construction Zone.** As provided in RSA 266:20, a zone designated by the Commissioner. See 105.12.

**101.28 Contract.** The written agreement between the State and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to the performance of the Work and the basis of payment.

The Contract includes the Invitation for Bids, Proposal, Contract Form and Contract Bond, Standard Specifications, Supplemental Specifications, Special Provisions, Prosecution of Work, Traffic Control Plan, Special Attentions, general and detailed Plans, Standard Plans for Road and Bridge Construction, Working Drawings, also any Change Orders, Extra Work Orders and Supplemental Agreements that are required to complete the construction of the Work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

**101.29 Contract Administrator.** The field representative of the Engineer having direct supervision of the administration of the Contract.

**101.30 Contract Bond.** The approved form of security in compliance with RSA 447:16 executed by the Contractor and his Surety or Sureties, guaranteeing complete execution of the contract and all

## SECTION 101

supplemental agreements pertaining thereto including the payment of all legal debts pertaining to the construction of the project.

**101.31 Contract Time.** The time allowed for completion of the contract, including authorized time extensions. See 108.07.

**101.32 Contract Pay Item.** A specifically described item of work for which a price is provided in the Proposal.

**101.33 Contractor.** The individual, partnership, firm, corporation, or any combination thereof, or joint venture, contracting with the State for performance of prescribed work. Said person or persons, acting directly or through an authorized agent or employee, shall be designated as the party of the second part to the Contract.

**101.34 Controlled Access Highway.** See right-of-way terms.

**101.35 Cul-De-Sac.** A local street open at one end only and with special provision for turning around.

**101.36 Culvert.** Any structure not classified as a Bridge which provides an opening under any roadway.

**101.37 Day.** Unless designated as a Working Day, or unless otherwise indicated, this term will mean a Calendar Day.

**101.38 Delay.** Any event, action, force, or factor that causes the established Contract Time to be exceeded for performance of the Contract.

- A. Compensable Delay. An excusable delay for which the Contractor may be entitled to additional monetary compensation.
- B. Excusable Delay. A delay to the Contract or phase completion date beyond the Contractor's control and not caused by the Contractor's fault or negligence and for which a Contract or phase time extension may be granted.
- C. Noncompensable Delay. Excusable delay for which the Contractor may be entitled to an extension of time but no additional monetary compensation.
- D. Nonexcusable Delay. A delay to the Contract or phase completion date that was reasonably foreseeable and within control of the Contractor for which no monetary compensation or time extension will be granted.

**101.39 Department.** The State of New Hampshire Department of Transportation, designated as the party of the first part to the contract.

**101.40 Differing Site Conditions.** Subsurface or latent physical conditions that, (1) differ materially from those indicated in the Contract, or (2) differ materially from conditions normally encountered or those conditions generally recognized as inherent in the nature of the Work required in the Contract, or (3) are unknown conditions of an unusual nature.

**101.41 Drive and Entrance.** See right-of-way terms.

**101.42 Easement.** A right acquired by public authority to use or control property for a designated highway purpose.

**101.43 Engineer.** The Assistant Commissioner of the Department, who is responsible for engineering supervision of the construction, acting directly or through his duly authorized representatives.



## SECTION 101

**101.44 Equipment.** All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the Work.

**101.45 Equitable Adjustment.** An adjustment in the Contract price and/or time.

**101.46 Erosion** “Wearing away of land by running water, waves, wind, ice, abrasion, and transportation.” (Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire, August, 1992).

**101.47 Escrow of Bid Documentation.** Preservation of the Bid Documents, under 101.15, of the successful Bidder for use by the Department and Bidder in any claims or litigation between the two parties arising out of the Contract.

**101.48 Executive Council.** Five member governing body which approves State contracts.

**101.49 Expression: By or to the Engineer.** In order to avoid cumbersome and confusing repetition of expressions in these specifications, it is hereby provided that any and all of the following words or any form of such words, unless clearly indicated otherwise, shall be understood to be followed by the words “by the Engineer” or “to the Engineer”:

Accepted, approved, authorized, condemned, considered, or deemed necessary, contemplated, designated, determined, directed, disapproved, established, given, indicated, insufficient, ordered, permitted, rejected, required, reserved, satisfactory, specified, sufficient, suitable, suspended, unacceptable, unsatisfactory.

**101.50 Extra Work.** Work performed by the Contractor not originally specified in the Contract, but found essential for the satisfactory completion of the project.

**101.51 Extra Work Order.** A document that amends the Contract and identifies work to be paid for as provided in 109.04.

**101.52 Floodplain.** A nearly flat, alluvial lowland bordering a stream, that is subject to inundation by floods.

**101.53 Floodway.** Channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100 year flood be carried without increases in flood heights of up to a maximum of 1.0 foot (0.3 m).

**101.54 Force Account.** A basis of payment for the directed performance of work with payment based on the actual cost for labor, materials and equipment with consideration for overhead and profit.

**101.55 Hazardous Material (toxic waste).** Shall mean material as defined by **RSA 147-A**

**101.56 Highway, Street, or Road.** A public way designated for purposes of vehicular travel or vehicular and pedestrian travel, including the entire area within the right-of-way.

**101.57 Holidays.** The following days are legal holidays in the State of New Hampshire used in determination of working days:

- New Year's Day
- Martin Luther King, Jr./Civil Rights Day
- Washington's Birthday (The third Monday in February)
- Memorial Day
- Independence Day
- Labor Day

## SECTION 101

Columbus Day  
Veterans Day  
Thanksgiving Day  
Christmas Day

If any holiday listed above falls on Sunday, the following Monday shall be considered a holiday. If any holiday listed above falls on Saturday, the preceding Friday shall be considered a holiday.

**101.58 Incentive/Disincentive Provisions.** An adjustment to the Contract price of a predetermined amount for each day the Work is completed ahead of or behind the specified date, phase or Contract completion date.

**101.59 Inspector.** The Engineer's authorized representative assigned to make inspections of the Work.

**101.60 Invitation for Bids.** The advertisement for Proposals for Work or Materials on which bids are requested. The advertisement will indicate the time and place of the opening of Proposals, the type and location of work to be performed, the character and quantity of the Material to be furnished and provide information on how to obtain Plans, Specifications and Proposal forms.

**101.61 Item Numbers and Section Numbers.** In these Specifications, items are numbered to correspond to sections. Each item shall be constructed in accordance with the specifications contained in the corresponding section.

The section numbers are intended for convenience of reference only and shall not be considered as having any bearing on the interpretation thereof.

In case of discrepancy between what the numbers for items would indicate and the item as written in words, the item as written in words shall govern.

**101.62 Laboratory.** The official testing laboratory of the Department at Concord. A "recognized laboratory" is any laboratory which may be designated or approved by the Engineer.

**101.63 Lane.** The portion of the traveled way for the movement of a single line of vehicles.

**101.64 Limited Access Highway.** See right-of-way terms.

**101.65 Limits of Construction.** An area with established boundaries, identified within the highway right-of-way or construction easements, where the construction is permitted.

**101.66 Lump Sum.** A single amount basis of payment for a complete Contract item as defined by the Specifications.

**101.67 Major and Minor Contract Items.** Any contract Item having an original value in excess of five percent of the original Contract total for contracts of \$1,000,000.00 or less, or three percent of the original Contract total for contracts greater than \$1,000,000.00 shall be considered as a major item. All other contract items are considered as minor.

**101.68 Materials.** Any substances specified for use in the construction of the Project and its appurtenances.

**101.69 Median.** That portion of a divided highway separating the traveled ways for traffic in opposite directions.

**101.70 Non-Participating Item.** As used on the Plans for Federal-aid projects, an item in which the cost is not shared by the Federal Government.

## SECTION 101

**101.71 Notice to Proceed.** Written notice to the Contractor to proceed with the Contract work; including the beginning of Contract time when applicable.

**101.72 Operational Construction Signs.** Warning signs used to advise and guide motorists through or around areas within a work zone. Typically these signs are mounted on portable supports for short-term, short-duration and mobile conditions.

**101.73 Pavement Structure.** The combination of subbase, base courses and surface courses placed on a subgrade to support the traffic load and distribute it to the roadbed.

**101.74 Permanent Construction Signs.** Warning signs used to advise motorists approaching a work zone. Typically these signs are mounted on posts and are in place for the duration of the project.

**101.75 Plans.** The Contract drawings or reproductions thereof, which show the location, character, dimensions, and details of the prescribed work, including all alterations thereof permissible under the Contract and authorized by duly approved written orders.

**101.76 Points of Access.** See right-of-way terms.

**101.77 Prequalification Statement.** A completed form on which the Contractor has furnished information as to its ability to perform and finance the Work. See 102.01.

**101.78 Prime Contractor.** The Contractor as defined above.

**101.79 Profile Grade.** The trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed. Profile grade means either elevation or gradient of such trace according to the context.

**101.80 Project.** The specific section(s) of the highway together with all appurtenances to be constructed under the Contract.

**101.81 Proposal.** A Bidder's offer, on Department prescribed forms, to perform stated work at the quoted prices.

**101.82 Proposal Form.** The prescribed form on which the Department requires the Bid to be submitted. See 102.02.

**101.83 Proposal Guaranty.** The security furnished with a Proposal to guaranty that the Bidder will enter into the contract if the Proposal is accepted.

**101.84 Prosecution of Work.** A document included in the Contract which gives the Contractor specific requirements and information unique to the Project, allowing for the satisfactory performance of the Work. It also includes the final and any intermediate completion dates.

**101.85 Qualified Products List (QPL).** A list of products prequalified by the Engineer as meeting the Contract requirements for specified materials to be incorporated into the Work. The list is maintained and updated yearly by the Bureau of Materials and Research.

**101.86 Responsive Bid.** A bid that meets all the requirements of the invitation for bids.

**101.87 Responsible Bidder.** A Bidder that the Department determines has the ability to perform the Contract work.

## SECTION 101

**101.88 Right-of-Way.** A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

**101.89 Right-of-Way Terms:**

**Limited Access Highway.** A highway laid out under the provisions of RSA 230:45 and to which all ingress and egress from abutting tracts of land is prohibited after completion of the work.

**Controlled Access Highway.** A highway laid out under the provisions of RSA 230:45 and to which ingress and egress from abutting tracts of land may be permitted.

**Point of Access.** An opening in the right-of-way line through which ingress and egress from the highway to abutting tracts of land may be made. RSA 236:13.

**Drive and Entrance.** The roadway over which a vehicle must operate for ingress and egress from the highway to abutting tracts of land. RSA 236:13.

**101.90 Roadbed.** The graded portion of a highway prepared as a foundation for the pavement structure and shoulders.

**101.91 Roadside.** A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

**101.92 Roadside Development.** Those items necessary for the preservation or replacement of landscape materials and features that may include suitable plantings and other improvements or ground cover to preserve and enhance the appearance and stability of the highway right-of-way or acquired easements.

**101.93 Roadway.** The portion of a highway within the limits of construction.

**101.94 Rock.** Where used in these specifications, this term shall be construed to mean igneous, metamorphic, or sedimentary rock.

**101.95 Sieve.** U.S.A. Standard Sieve, as defined in AASHTO M 92. Measure percent passing sieve by weight.

**101.96 Shoulder.** The portion of the roadway contiguous with the traveled way for lateral support of base and surface courses and for accommodation of stopped vehicles, for emergency use.

**101.97 Sidewalk.** That portion of the roadway primarily constructed for the use of pedestrians.

**101.98 Solid Waste.** Shall mean material as defined by RSA 149-M.

**101.99 Special Attentions.** Notices calling bidders attention to issues applicable to an individual project.

**101.100 Special Provisions.** Additions and revisions to the Standard and Supplemental Specifications applicable to an individual project.

**101.101 Specifications.** The compilation of Standard Specifications, Supplemental Specifications, Special Provisions, Special Attentions and other requirements for the performance of prescribed work.

**101.102 Specified Completion Date.** The date on which the Contract work is specified to be completed.

**101.103 Standard Specifications.** The New Hampshire "Standard Specifications for Road and Bridge Construction" approved for general application and repetitive use.

## SECTION 101

**101.104 Standard Plans.** The New Hampshire “Standard Plans for Road and Bridge Construction” approved for general application and repetitive use.

**101.105 Standardized Plant Names.** The official Code of Standardized Plant Names of the American Joint Committee on Horticultural Nomenclature.

**101.106 State.** The State of New Hampshire.

**101.107 Structures.** Bridges, conduits, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, headwalls, end sections, buildings, sewers, service pipes, underdrains, and other features which may be encountered in the Work and not otherwise classed herein.

**101.108 Stump.** The part of a tree remaining in the earth after the stem or trunk falls or is cut off; a standing tree trunk from which the upper part and the branches have been removed.

**101.109 Subbase.** Layers of specified material thickness placed on a subgrade to support a base course.

**101.110 Subcontractor.** An individual, partnership, firm, corporation, or any combination thereof, or joint venture, to whom the Contractor sublets any part of the Contract.

**101.111 Subgrade.** The top surface of a roadbed upon which the pavement structure and shoulders are constructed.

**101.112 Subsidiary and Subsidiary Item.** These terms are used to indicate work for which no direct payment will be made. Such work is considered to be incidental to items having contract prices, and the bid prices submitted by the Contractor shall be sufficient to absorb the cost of all work designated as subsidiary or as subsidiary items.

**101.113 Substructure.** All of that part of a Bridge below the bearings of simple and continuous spans, skewbacks of arches, and tops of footings of rigid frames, together with the backwalls and wingwalls.

**101.114 Superintendent.** The Contractor's authorized representative in responsible charge of the work.

**101.115 Superstructure.** The entire Bridge except the substructure.

**101.116 Supplemental Specifications.** Approved additions and revisions to the Standard Specifications.

**101.117 Supplementary Agreement.** A written agreement between the Contractor and the Engineer for the performance of work by the Contractor at agreed prices under items not originally included in the Contract.

**101.118 Surcharge.** Temporary load placed for the purpose of consolidating the underlying soil.

**101.119 Surety.** The corporation, partnership, or individual, other than the Contractor, executing a bond furnished by the Contractor.

**101.120 Surface Course.** One or more layers of a specified material of designed thickness, to accommodate the traffic load, placed on base courses. The top layer is sometimes called the “wearing course”.

## SECTION 101

**101.121 Topsoil.** The surface layer of soil and sod encountered during construction.

**101.122 Traffic.** The movement of vehicles, pedestrians, animals, and any other conveyance either singly or together through an area of the project or along a route.

**101.123 Traffic Control Device.** As defined in the MUTCD all signs, signals, markings, and devices placed on, over, or adjacent to a street or highway by authority of a public body or official having jurisdiction to regulate, warn, or guide traffic.

**101.124 Traffic Control Plan (TCP).** A document included in the Contract which gives the Contractor specific requirements and procedures for controlling traffic during the course of construction. It also allows the Contractor to submit for approval variations of such plan.

**101.125 Traffic Lane.** See Lane.

**101.126 Traveled Way.** The portion of the roadway provided for the movement of vehicles, exclusive of shoulders.

**101.127 Unbalanced Bid, Materially.** A Bid that generates a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid will result in the lowest ultimate cost to the Department. See 102.08

**101.128 Unbalanced Bid, Mathematically.** A Bid containing lump sum or unit bid items that do not reflect reasonable costs plus a reasonable proportionate share of bidder's anticipated profit, overhead costs and other indirect costs. See 102.08

**101.129 Wear.** The percent of wear of aggregate as determined by the AASHTO T 96 (Los Angeles Abrasion Test). The grading shall be Grading A unless otherwise specified.

**101.130 Wetland.** "An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include, but are not limited to swamps, marshes, bogs, and similar areas." (NH Code of Administrative Rules, Chapter Wt 101.87, 1997)

**101.131 Work.** The furnishing of all labor, materials, equipment, and incidentals necessary or convenient to the successful completion of the Project, and the carrying out of the duties and obligations imposed by the Contract.

**101.132 Working Day.** Any calendar day, except (1) Saturdays, Sundays, and Contract designated legal Holidays; (2) the period between December 1 to April 1 inclusive; (3) days where conditions identified in the Contract require the Contractor to suspend construction operations; (4) days with inclement weather or conditions beyond the Contractor's control, that prevent prosecution of the scheduled work with at least 75 percent of the normal daily labor and equipment force in the controlling construction operation for at least 60 percent of the daily hours routinely worked.

Should the Contractor prepare to begin work on any day which inclement weather, or the conditions resulting from the weather, prevent the Work from beginning at the usual starting time, and the crew is dismissed as a result, the Contractor will not be charged for a working day whether or not conditions change during the day and the rest of the day becomes suitable for construction operations.

**101.133 Working Drawings.** Temporary bridge plans, cofferdam plans, water diversion structure plans, plans of precast elements to be designed by the Contractor, shop fabrication drawings, erection plans, falsework plans, temporary support systems, bending diagrams when required for reinforcing steel,

## SECTION 101

scaffolding plans and bridge analysis, detour plans, sign structure plans, traffic signal poles and mast arm plans, Storm Water Pollution Prevention Plan (SWPPP)s or any other supplementary plans or similar data required of the Contractor to control the Work and its prosecution.

### ***SECTION 102 -- BIDDING REQUIREMENTS AND CONDITIONS***

**102.01 Prequalification of Bidders.** In order that the Department may establish the rating or competency of those who propose to become bidders, at least eight days before submitting a proposal, a prospective bidder shall provide the Department with a completed prequalification application and a confidential financial statement, in accordance with the New Hampshire Code of Administrative Rules Part Tra 401, on a form furnished by the Department. Certification by a public accountant may be required. The statement shall include a complete report of the bidder's financial assets and liabilities, equipment owned or leased, past and current work history, organizational structure including supervisory personnel, and references. In the event that any intended Bidder fails to submit a prequalification statement as prescribed above, the Department may refuse to supply such intended Bidder with plans, specifications, and proposals for any projects.

Bidders shall prequalify at least once a year.

Prequalification questionnaire and regulations may be obtained by prospective Bidders from the Department's Bureau of Finance & Contracts.

Prequalification status may be changed during the year upon submission of additional favorable reports or upon evidence of unsatisfactory performance as determined by the Department. Prequalification will establish the bidders capacity to submit Proposals on individual projects of a given size or for a particular type of work.

**102.02 Contents of Proposal Forms.** The Proposal Form will state the location and description of the contemplated construction, will show the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a schedule of items for which unit bid prices are invited. The proposal will state the contract time, the amount of the Proposal Guaranty, and the date, time, and place of the opening of Proposals. The Proposal will include a statement regarding anti-trust activities, collusion, and restraint of free competitive bidding. The Proposal Form will also include Supplemental Specifications, Special Provisions, Special Attentions and other requirements which are not contained in the Standard Specifications.

All papers bound with or attached to the Proposal Form are considered a part thereof and must not be detached or altered when the Proposal is submitted, except for changes authorized in writing by the Department.

The plans, specifications, and other documents designated in the Proposal Form will be considered a part of the Proposal, whether attached or not.

The prospective Bidder will be required to pay the Department the sum stated in the Invitation for Bids for each copy of the Proposal and each set of plans obtained.

**102.03 Issuance of Proposal Form.** The Department reserves the right to disqualify a Bidder as non-responsive or refuse to issue a Proposal Form to a prospective Bidder for any of the following reasons:

- A. Lack of competency or of adequate machinery, plant, or other equipment, as revealed by the prequalification statement required under 102.01.
- B. Uncompleted work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded.
- C. Failure to pay, or satisfactorily settle, all bills due for labor and material on former Contracts.
- D. Failure to comply with any prequalification regulations of the Department.

## SECTION 102

- E. Default under previous Contracts.
- F. Unsatisfactory performance on previous or current Contract(s).
- G. Misconduct that is of such a serious nature as to adversely affect the ability of the Contractor to perform future work.
- H. Failure to reimburse moneys owed on any previously awarded Department Contracts including those where the prospective bidder is a party to a joint venture and the joint venture has failed to reimburse the Department for moneys owed.

Prospective Bidders who have not been prequalified may be furnished a proposal marked as "Sample Proposal, Not for Bidding Purposes". Such sample proposals will not be accepted by the Department as a valid bid.

**102.04 Interpretation of Quantities in the Bid Proposal.** The quantities appearing in the bid Proposal are estimates used for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished in accordance with the Contract. The estimated quantities of work to be done and materials to be furnished may each be increased, decreased, or eliminated in their entirety as prescribed in 109.03.

**102.05 Examination of Plans, Specifications, Special Provisions, Proposal, and Site of Work.** The Bidder is expected to examine carefully the site of the proposed work, the Proposal, Plans, Standard Specifications, Supplemental Specifications, Special Provisions and Contract before submitting a Proposal. If no site investigation is performed, the bidder is responsible for all site conditions that should have been discovered had a reasonable site investigation been performed. The submission of a Proposal will be considered conclusive evidence that the bidder is satisfied with the conditions to be encountered in performing the Work and as to the requirements of the proposed Contract. It will be assumed that the Bidder has also investigated and is satisfied with the sources of supply for all materials.

Whenever boring logs or other records of subsurface investigations obtained by the Department are available for a Bidder's inspection, it is understood that these records have been obtained with reasonable care and recorded in good faith. The information is made available to bidders so all may have access to the identical subsurface information available to the Department and is not intended as a substitute for personal investigations, interpretations, and judgment of the bidders.

Boring logs and other subsurface investigation records are available for inspection at the office of the Department's Bureau of Materials & Research, prior to the bid opening by appointment with 72 hours advance notice. Copies of the reports are also available during the bidding period at the office of the Associated General Contractors of New Hampshire, Inc., Bow, New Hampshire.

There is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations or records are representative of those conditions existing throughout such areas, or any part thereof, or that unforeseen conditions will not occur, or that materials other than, or in proportions different from those indicated, will not be encountered.

The word "rock" or the word "ledge" or the symbol for rock or ledge wherever used on the Plans shall be interpreted to mean only that rock may exist at the indicated elevations.

The Department will not be bound by any statement or representation concerning conditions or description of work unless they are included in the Proposal Form, Plans, Specifications, Supplemental Specifications, Special Provisions, or related Contract documents. Oral explanations or instructions given before the award of the Contract by Department employees or agents will not be binding.

Any request for explanation of the meaning or interpretation of the Proposal Form, Plans, Specifications, Supplemental Specifications, Special Provisions, or related Contract documents shall be submitted in adequate time to allow a reply to reach all bidders before submission of their bid Proposal. Interpretations or explanations made by the Department in response to such requests will be issued as an Addendum to the Proposal Form. All modifications or corrections to the proposal will be made by a written Addendum sent by either certified mail or telefacsimile to prospective bidders. All Addenda sent by telefacsimile shall be acknowledged by a signed telefacsimile to the Department.



**102.06 Familiarity with Laws.** The Bidder is assumed to have made itself familiar with all Federal and State laws and all local by-laws, ordinances, and regulations which in any manner affect those engaged or employed on the Work or affect the materials or equipment used in the Work or affect the conduct of the work, and no plea of ignorance or misunderstanding will be considered. If the Bidder shall discover any provision in the Plans or Specifications which is in conflict with any such law, by-law, ordinance, or regulation, he shall forthwith report it to the Engineer in writing.

**102.07 Preparation of Proposal.** The bidder shall submit the Proposal on the forms provided by the Department or on previously-approved, substantially-identical forms generated by computer software. Any errors in transferring item numbers, item descriptions, or quantities from the Department's Proposal Form to the electronic format will be the responsibility of the bidder. The Bidder shall specify a unit price, both in words and figures, for each pay item for which a quantity is given and shall also show the products of the respective unit prices and quantities in figures in the column provided. The total amount of the Proposal is to be obtained by adding the amounts of the several items. All the words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the bidder on the Proposal is to be altered, it should be crossed out in ink, the new unit price or lump sum bid entered above or below it and initialed by the bidder, also in ink. In case of discrepancy between the prices in words and those in figures, the prices in words shall govern.

Bidders are expected to submit unit prices in dollars and cents. Unit prices extending more than two digits after the decimal will be rounded to the nearest whole cent. When rounding is required, \$.005 or more will be shown as the next higher cent.

When an item in the proposal contains a choice to be made by the bidder, the bidder shall indicate the choice in accordance with the specifications for that particular item.

All Department Addendum provisions to the bid proposal must accompany the submitted bid documents.

The Proposal submitted must be signed in ink by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture, by one or more officers of a corporation, or by an agent of the Contractor legally qualified and acceptable to the Department. If the bid is made by an individual, the individual's name and post office address must be shown; by a partnership, the name and post office address of each partnership member must be shown; as a joint venture, the name and post office address of each member or officer of the firms represented by the joint venture must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles, and business address of the president, secretary, and treasurer.

**102.08 Irregular Proposals.** Proposals will be considered irregular and may be rejected as non-responsive for any of the following reasons:

- A. The Proposal is on a form (or format if computer generated) other than that provided or approved by the Department, or if the form is altered or any part thereof is detached or incomplete.
- B. There are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Proposal incomplete, indefinite, or ambiguous as to its meaning.
- C. The bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award. This does not exclude a Proposal limiting the maximum gross amount of awards acceptable to any one bidder at any one bid letting, provided that selection of awards is made by the Department.
- D. The Proposal does not contain a unit price for each pay item listed except in the case of authorized alternate pay items.
- E. Any of the unit bid prices are significantly unbalanced to the potential detriment of the Department.
- F. The Proposal is not properly signed.

## SECTION 102

- G. The Proposal is not typed or completed in ink.
- H. The Proposal does not include the bid documentation in a sealed container and the affidavit of bid documentation if required by the Contract.
- I. The Contractor fails to provide a properly executed Proposal guaranty.
- J. The bidder fails to sign the non-collusive bidding certification.
- K. The Proposal fails to comply with any other material requirement of the Invitation for Bids.
- L. Mathematical errors.

**102.09 Proposal Guaranty.** A Proposal will not be considered unless accompanied by a guaranty of the character and amount indicated in the proposal and made payable to the “Treasurer, State of New Hampshire.” If a bid bond is used by the Bidder, it shall be prepared as follows:

- A. The bond shall be completed in a form acceptable to the Department, and
- B. The bonding company issuing the bond shall be licensed to transact business in the State of New Hampshire, and
- C. The bonding company shall be listed on the current list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies”, as published by the United States Department of the Treasury, Fiscal Service, Circular 570.
- D. In the event that any irregularities are contained in the bid guaranty, the bidder will have seven calendar days from the time the bids are opened to correct the irregularities. If such irregularities are not corrected to the satisfaction of the Department, the Proposal will be rejected.

**102.10 Delivery of Proposal.** Proposals shall be placed in a sealed envelope plainly marked to indicate its contents, and addressed to the Department at the address shown on the Invitation for Bids. Sealed Proposals shall be received and deposited in the Bid Box at the location specified prior to the time and date specified in the Invitation for Bids. It shall be the Bidders responsibility to ensure the Proposal is deposited as specified. Proposals delivered to the Department by alternate means are submitted at the sole risk of the Bidder. The Department will not accept responsibility for any reason if the Proposal is not deposited in the Bid Box by the specified time and date. Proposals received after the time for opening of bids will be returned to the bidder unopened.

**102.11 Withdrawal or Revisions of Proposals.** A bidder may withdraw or revise a Proposal after it has been delivered to the Department provided the request for withdrawal or revision is received by the Department, in writing before the time set for receipt of proposals.

**102.12 Combination Proposals.** If the Department so elects, Proposals may be issued for projects in combination or separately, so that Proposals may be submitted either on the combination or on separate units of the combination. The award of combination Proposals or separate Proposals will be made to the advantage of the Department. No combination Proposals, other than those specifically set up in the proposals by the Department, will be considered. Separate Contracts will be written for each individual project included in the combination.

**102.13 Public Opening of Proposals.** Proposals will be opened and read publicly at the time and place indicated in the Invitation for Bids.

**102.14 Disqualification of Bidders.** Either of the following reasons will be considered sufficient for the disqualification of a bidder and the rejection of a Proposal:

- A. More than one Proposal for the same work from an individual, firm, or corporation under the same or different name.
- B. Evidence of collusion among bidders. Participants in such collusion will be disqualified as bidders for any future work of the Department until they are reinstated as qualified bidders.

## SECTION 102

**102.15 Materials Statement.** The successful bidder shall, when requested furnish a complete statement of the origin or supplier of materials to be used in the construction of the work, together with samples to be tested for conformance with the Contract provisions.

**102.16 Non-Collusive Bidding Certification.** Every Proposal submitted to the Department shall contain the following statement affirmed by the bidder as true under the penalties of Law. This Certification, on Department forms, shall be signed by the bidders and submitted with the bid documents.

### Non-Collusive Bidding Certification:

By submission of this Proposal, each bidder and each person signing on behalf of any bidder, certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:

1. The prices in this bid Proposal have been arrived at independently without collusion, consultation, communication, or agreement with any other bidder or with any competitor for the purpose of restricting competition.
  2. Unless required by law, the prices that have been quoted in this bid Proposal have not been knowingly disclosed and will not knowingly be disclosed by the bidder, directly or indirectly, to any other bidder or competitor prior to opening of Proposals.
  3. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.
  4. The signers of the Proposal hereby tender to the Department this sworn statement that the named Contractor(s) has not, whether directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action to restrain free competitive bidding in connection with this Proposal.
- A. A bid proposal will not be considered for award nor will any award be made where there has not been compliance with the statements in the certification above.
- B. The fact a bidder (1) has published price lists, rates, tariffs covering items being procured, (2) has informed prospective customers of proposed or pending publication of new or revised price lists for such item, or (3) has sold the same items to other customers at the same prices being bid, does not constitute a disclosure within the meaning of part 1 of the certification above.

## SECTION 103 -- AWARD AND EXECUTION OF CONTRACT

**103.01 Consideration of Proposals.** After Proposals are opened and read, they will be compared on the basis of summation of the products of the quantities and the unit bid prices unless otherwise defined in the Proposal Form. The results of the comparisons will be available to the public. In case of a discrepancy between the prices in words and those in figures, the prices in words shall govern. If a discrepancy exists between the total shown in the bid and that obtained by adding the products of the quantities of items and the unit bid prices, the latter shall govern. The Department reserves the right to reject any or all Proposals, waive technicalities, correct minor discrepancies, or advertise for new Proposals if, in the judgment of the Commissioner, the best interests of the State will be promoted thereby.

**103.02 Award of Contract.** Within 60 calendar days after the opening of Proposals, if a Contract is to be awarded, the award will be made to the prequalified bidder who submits the lowest priced responsive Proposal. The successful bidder will be notified, by letter mailed to the address shown on the Proposal, of the acceptance of the Proposal pending Governor and Council approval. If the contract is not

## SECTION 103

awarded by the Department and approved by the Governor and Council within 60 days after the opening of Proposals, the bidder has the right to withdraw the bid without penalty.

**103.03 Cancellation of Award.** The Department may cancel the award of any Contract before execution without incurring any liability against the Department.

**103.04 Return of Proposal Guaranty.** Proposal Guaranties, of all except those of the two lowest bidders, will be returned within seven days following the opening of the Proposals. Irregular Proposals will have the Proposal Guaranties returned upon determination of the irregularity.

The retained Proposal Guaranties of the two lowest bidders will be returned within ten days following the approval by the Governor and Council in the award of the Contract. A Bidder will not be released from its bidding obligations because of errors in the preparation of the Proposal without forfeiting the Proposal Guaranty.

**103.05 Contract Bond.** Unless specifically waived in the Proposal, upon execution of the Contract, the successful bidder shall furnish the Department a surety bond or bonds equal to the sum of the Contract amount. If a bond is used it shall meet the following requirements:

- A. The form of the bond(s) shall be acceptable to the Department, and
- B. The bonding company issuing the bond(s) shall be licensed to transact business in the State of New Hampshire, and
- C. The bonding company issuing the bond(s) shall be listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published by the United States Department of the Treasury, Fiscal Service, Circular 570.

The Bonds shall guarantee the execution, faithful performance and completion of the Work to be done under the Contract, and payment in full of all bills and accounts for materials and labor used in the work.

In the event the surety or bonding company fails or becomes financially insolvent, the Contractor shall file a new bond(s) in the amount designated by the Department, within 30 calendar days of such failure, or insolvency.

**103.06 Disadvantaged Business Enterprise (DBE) Program Requirements.** The Department is required to set an overall annual goal for DBE participation in Federal-aid projects. In order to fulfill that goal, Bidders during the bidding stage and the low Bidder after the opening of bids are encouraged to demonstrate best efforts to utilize minority subcontractors by soliciting bids from DBEs. These measures to obtain participation are known as race-neutral. *Race-neutral* DBE participation occurs when a DBE receives a prime contract through customary competitive procurement procedures, is awarded a subcontract on a prime contract that does not carry a DBE contract goal, or even if there is a DBE contract goal, wins a subcontract from a prime contractor that did not consider its DBE status in making the award (e.g. prime contractor that uses a strict low bid system to award subcontracts). The Department will use contract goals as a race-conscious means of meeting any portion of the overall goal not achieved by use of race-neutral means.

A DBE is defined as a business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purpose of this definition:

- (1) "Socially and economically disadvantaged person" means an individual who is a citizen or lawful permanent resident of the United States and who is a Woman, Black, Hispanic, Portuguese, Native American, Asian American, or a member of another group, or an individual found to be disadvantaged by the Small Business Administration pursuant to Section 3 of the Small Business Act.
- (2) "Owned and controlled" means a business which is:
  - (a) a sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.

- (b) a partnership, joint venture or limited liability company in which at least 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).
- (c) a corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with the percentage of ownership. Disadvantaged participation in a joint venture must also be based on the sharing of real economic interest and must include proportionate control over management, capital, and earnings, as above.

If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of this program, a firm is considered a bona fide DBE.

A current listing of certified DBEs that may wish to participate in the highway construction program and the scope of work for which they are certified will be in the Proposal.

Credit will be given for the value described by a DBE performing as:

- A. A prime contractor; actual value of work performed by own forces.
- B. An approved subcontractor; 100% of expenditures committed.
- C. An owner-operator of construction equipment; 100% of expenditures committed.
- D. A manufacturer; 100% of expenditures committed.

The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.

Brokers and packagers shall not be regarded as manufacturers.

- E. A regular dealer; 60% of expenditures committed.

A regular dealer is defined as a firm that owns, operates, or maintains a store, warehouse or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public.

Brokers and packagers shall not be regarded as regular dealers.

- F. A renter of construction equipment to a contractor; 20% of expenditures committed, with or without operator.

- G. A bona fide service provider; 100% of reasonable fees or commissions.

Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract.

Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.

- H. A trucking, hauling or delivery operation.

100% of expenditures committed when trucks are owned, operated, licensed and insured by the DBE and used on the contract and, if applicable, includes the cost of the materials and supplies.

100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator.

100% of reasonable fees or commissions the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.

- I. Any combination of the above.

On all Federal-aid projects, the Contractor, during the life of the contract and on a semi-annual basis for the periods covering October 1<sup>st</sup> –March 31<sup>st</sup> and April 1<sup>st</sup> –September 30<sup>th</sup> shall submit a listing of all DBEs that were engaged in the Work, specifying item(s) of work performed by each DBE and the dollar amount paid for each item of work. Copies of canceled checks to the DBEs or statements from the DBEs together with supporting documentation (i.e., billings, invoices, etc., referenced to the contract) must be submitted as proof of payment. This documentation shall be submitted to the Department within 30 days of the reporting period end. Failure of the Contractor to submit this information may result in the Department withholding progress payments.

## SECTION 103

On Federal-aid projects which specify a DBE contract goal in the Information Report, Bidders during the bidding stage and the low Bidder after the opening of the bids, shall make every reasonable good faith effort to use certified disadvantaged business enterprises for work to be performed under the proposed Contract. In addition the following is also required on Federal-aid projects which specify a DBE contract goal.

Within 15 days after the bid opening date, the low Bidder shall file with the Bureau of Contracts a Disadvantaged Business Enterprise (DBE) Commitment Form provided by the Department. This form will list the DBE firms that will be used during the execution of the Work. The list shall show the name of the firm, the item/material/type of work involved and the dollar amount of work to be performed. The dollar total of each commitment shall be totaled and a percentage determined. In addition to the commitment form, letters of intent signed by principals of the low bidder and each DBE firm listed, shall be submitted prior to Department approval of the DBE commitment.

If the low bidder cannot provide the list and accepted letters of intent showing DBE participation in the Work, within the above time frame, the Contractor may request additional time through the Department's DBE Liaison Officer to comply or to provide written documentation of efforts to obtain participation. Acceptable documentation showing all good faith efforts made to obtain participation may be reason to waive the goal requirement of the project.

Failure to provide the required listing with the dollar participation total or acceptable documentation of good faith efforts to obtain DBE participation within 15 days after the bid opening date, or by another deadline established by the DBE Liaison Officer will be considered a lack of responsiveness on the part of the low bidder. Rejection of the low bid under these circumstances will require the low bidder to surrender the Proposal Guaranty to the Department.

The submission and approval of the above forms does not constitute a formal subcontract as required in 108.01.

If for any reason during the progress of the Work the Contractor finds that DBEs included on the list are unable to perform the proposed work, the Contractor, with written release by the committed DBE or approval of the Department, may substitute other DBE firms for those named on the list.

If the Contractor is able to clearly document his inability to find qualified substitute firms to meet the project goal, the Contractor may request in writing a waiver of that goal.

If at any time during the life of the Contract it is determined that the Contractor is not fulfilling the goal or commitment(s) and is not making a good faith effort to fulfill the DBE requirement, the Department may withhold progress payments.

Failure of the Contractor to meet the project goal or the specified DBE commitment(s), whichever is the lowest, will result in a reduction in Contract payment by an amount equal to the difference between the actual Contract dollars multiplied by the applicable commitment percentage and the dollar value of the work actually performed by the DBEs. If the Contractor's failure to meet the DBE goal or commitment(s) in the Contract is the result of circumstances clearly documented to be beyond the control of the Contractor, a written request for waiver of the goal or commitment(s) must be received. The Commissioner may waive, in whole or part, the reduction in contract payments specified herein.

Fulfillment of the goal percentage shall be determined by dividing the dollars committed to the DBEs by the actual contract dollars.

These requirements are in addition to all other Equal Employment Opportunity requirements on Federal-aid contracts.

**103.07 Execution and Approval of Contract.** The signed Contract, together with the Contract Bond, certificate of insurance and the Disadvantaged Business Enterprise forms, if required, shall be returned to the Department within 20 days after the date of notice that the Proposal has been accepted. The Contract will not be considered approved until it has been fully executed by all of the parties to the Contract and the award approved by the Governor and Executive Council.

**103.08 Failure to Execute Contract.** If the successful bidder fails to execute the Contract and file acceptable bond within 20 days after the date of notice of acceptance of the Proposal, the Department may



cancel the notice of award and retain the bidder's Proposal Guaranty which shall become the property of the Department, not as a penalty, but in liquidation of damages sustained. Contract award may then be made to the next lowest responsible bidder or the Work may be readvertised.

***SECTION 104 -- SCOPE OF WORK***

**104.01 Intent of Contract.** The intent of the Contract is to provide for the construction and completion in every detail of the work it describes. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the Work under the Contract.

**104.02 Differing Site Conditions.** If differing site conditions are encountered at the work site, the Contractor shall promptly notify the Department as specified in 104.06. No further disturbance of the site or performance of the affected work is to be done after the alleged differing site conditions are noted unless directed otherwise in writing by the Engineer.

Upon written notification, the Engineer will investigate the conditions and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment, excluding loss of anticipated profits, will be made and the Contract modified in writing accordingly. The Engineer will notify the Contractor whether or not an adjustment in the Contract is warranted.

No Contract adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice as specified in 104.06.

Payment will be made under 109.04 and adjustments in Contract time will be made under 108.07 unless there is failure to notify the Department under 104.06.

**104.03 Changes in Character of Work.** The Engineer reserves the right to provide written notice to the Contractor at any time during the Contract to change Major Item quantities or make other alterations considered necessary to satisfactorily complete the Contract.

- A. Such changes in quantities and alterations do not invalidate the Contract nor release the Contract surety.
- B. If the directed changes require additional time to complete the Contract, adjustments in the Contract Time will be made under 108.07.
- C. Payments for the alterations in the Work or changed Major Item quantities will be made as provided under 109.03 or 109.04.

If there are significant changes in the character of the Work, as defined herein an adjustment will be made to the Contract under the provisions of 109.03 or 109.04, as applicable. If there are not significant changes in the character of the Work, the altered Work will be paid for as provided elsewhere in the Contract.

The basis of the Contract adjustment shall be agreed upon before the performance of the Work. If a basis cannot be agreed upon, prosecution of the Work may be ordered by the Department under the Force Account provisions of 109.04.

The term "significant change" shall be construed to apply when the character of the Work as altered (1) differs materially in kind or nature from that involved or included in the original proposed construction or (2) when the quantity for a Major Item of Work as defined elsewhere in the Contract is increased in excess of 125 percent or decreased below 75 percent of the original Contract quantity.

Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of the original Contract item quantity. In the case of a decrease in quantity below 75 percent of the original Contract item quantity any allowance shall apply to only the actual quantity of work performed.

## SECTION 104

**104.04 Suspensions of Work Ordered by the Engineer.** The Engineer may suspend all or any portion of the Work for any reason during performance of the Contract. Suspension of all or any portion of the Work will be done by written notice to the Contractor.

- A. If the suspension or delay resulting from the written order is considered unreasonable, or not customary, or not inherent to the construction industry, the Contractor shall submit a written request providing the reasons and justification for any Contract adjustment considered necessary as a result of the suspension or delay. The written request for Contract adjustment must be submitted to the Engineer in writing within seven days following receipt of the notice to resume work. A Contract adjustment will not be made unless the request for adjustment has been submitted within the prescribed time.
- B. There will be no Contract adjustment under the provisions of this Subsection if the Work would have been suspended or delayed by any other cause, or for which an adjustment is provided for, or excluded under any other term or condition of the Contract.
- C. The request for a Contract adjustment will be reviewed by the Engineer. If there is agreement that, (1) there has been an increase in the Contract performance cost or time as a result of such suspension and (2) the suspension was caused by conditions beyond the control of and not the fault of the Contractor, Contract suppliers, or subcontractors at any approved tier; and not caused by weather, an adjustment will be made to the Contract under 109.04.

**104.05 Extra Work.** Extra Work shall be performed by the Contractor in accordance with the Specifications and as directed, and will be paid for as provided under 109.04.

When the Contract provides for payment of certain work under Extra Work, no further order from the Engineer will be necessary for such work; otherwise, when the Engineer determines that Extra Work is to be performed, an Extra Work Order will be issued.

**104.06 Notification of Differing Site Conditions, Changes and Extra Work.** The Contractor shall promptly notify the Engineer of alleged changes to the Contract due to Differing Site Conditions, Extra Work, altered work beyond the scope of the Contract, or action(s) taken by the Department that changed the Contract terms and conditions.

- A. No further work is to be performed or Contract item expense incurred with relation to the claimed change after the date the change allegedly occurred unless directed otherwise in writing by the Engineer.
- B. Immediately notify the Engineer verbally of the alleged change or Extra Work occasioned by the site conditions or actions by the Department and, within five days of the date that the alleged change or action was noted, provide the following information to the Engineer in writing:
  - 1. The date of occurrence and the nature and circumstances of the occurrence that constitute a change.
  - 2. Name, title, and activity of each Department representative knowledgeable of the claimed change.
  - 3. Identify any documents and the substance of any oral communication involved in the claimed change.
  - 4. Basis for a claim of accelerated schedule performance.
  - 5. Basis for a claim that the work is not required by the Contract.
  - 6. Particular elements of Contract performance for which additional compensation may be sought under this Section including:
    - a. Pay item(s) that has been or may be affected by the claimed change.
    - b. Labor or materials, or both, that will be added, deleted, or wasted by the claimed change and what equipment will be idled or required.
    - c. Delay and disruption in the manner and sequence of performance that has been or will be caused.



- d. Adjustments to Contract price(s), delivery schedule(s), staging, and Contract Time estimated due to the claimed change.
- e. Estimate of the time within which the Department must respond to the notice to minimize cost, delay, or disruption of performance.

The failure of the Contractor to provide required notice under this Section constitutes a waiver of any and all claims that may arise as a result of the alleged change.

- C. Following submission of the notification to the Engineer, and in the absence of directions received to the contrary from an authorized representative of the Department, the Contractor shall continue diligent prosecution of the Work under the Contract to the maximum extent possible under the Contract provisions.

Within ten days after receipt of notice, the Engineer shall respond in writing to the Contractor to:

- 1. Confirm that a change occurred and, when necessary, direct the method and manner of further performance, or
- 2. Deny that a change occurred and, when necessary, direct the method and manner of further performance, or
- 3. Advise the Contractor that adequate information has not been submitted to decide whether (1) or (2) applies, and indicate the needed information and date it is to be received by the Engineer for further review. The Department will respond to such additional information within ten days of receipt from the Contractor.

Any adjustments made to the Contract shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide requested additional information in accordance with this clause.

**104.07 Maintenance of Traffic.** The Contractor shall keep all roads open to all traffic during construction. Where provided in the Contract, or approved by the Engineer, traffic may be bypassed over an approved detour route. The Contractor may propose to construct detours not shown on the Plans. The Contractor shall submit proposed detour plans for documentation in accordance with 105.02, which shall show the proposed location, alignment, grade, typical cross section, protective fixtures and signing. The section of the project being used by public traffic shall be kept in a condition that safely and adequately accommodates traffic. The Contractor shall furnish, erect, and maintain barricades, warning signs, delineators, striping, flaggers, and pilot cars in accordance with the MUTCD and Sections 618, 619 and 632. The Contractor shall bear all expense of maintaining the section of road undergoing improvement including all temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, farms, and other features as may be necessary. Snow removal from the roadway is not required during winter work suspensions if all conditions set forth in 104.07D and 619.3.1.9.1 are met. Payment for the furnishing, installation, and maintenance of traffic control will be as provided in Section 619. No other additional compensation for maintenance will be made except as provided below:

- A. Detours. When the Contract contains an item for "Construct and Remove of Detours" or "Temporary Bridge," the payment for such items covers all costs of constructing, maintaining, and obliterating detours, including construction and removal of temporary bridges and accessory features. Right-of-Way for temporary highways or bridges designated in the Contract will be furnished by the Department.
- B. Maintenance of Traffic During Suspension of Work.
  - 1. Suspensions Ordered by the Engineer or Winter Suspensions due to climatic conditions. The Contractor shall make passable and open to traffic the sections of the project and temporary roadways as agreed upon between the Contractor and the Engineer for the accommodation of necessary traffic during the anticipated period of suspension.
 

During this suspension period the maintenance of the temporary roadway and sections of the Project will be the responsibility of the Department subject to 105.14.

## SECTION 104

When Work is resumed, the Contractor shall replace or restore any work or materials lost or damaged because of the temporary use of the Project and remove work or materials used in the temporary maintenance and complete the Project as though its prosecution has been continuous and without interference. Additional work caused by the suspension, for reasons beyond the Contractor's control, in accordance with 104.13 and 619.5.4 will be paid for at Contract prices or by Extra Work.

2. Other Suspensions of Work. When Work is suspended for any other reason including but not limited to the following: for failure to correct conditions unsafe for the workers or the general public, for failure to carry out orders of the Engineer or for other reasons caused by the Contractor, all costs for maintenance of the roadway to accommodate traffic during the suspended period shall be borne by the Contractor.
- C. Maintenance Directed by the Engineer. If the Engineer directs special maintenance for the benefit of the traveling public not otherwise included in the Contract, payment will be on the basis of Contract unit prices or under Subsection 104.03 Changes in the Character of Work. The Engineer will determine the work to be classed as special maintenance
- D. All Projects, which will encompass construction activities over the course of two or more construction seasons, shall be required to hold a "Project Winter Maintenance Meeting" prior to October 15th. This meeting shall as a minimum involve personnel from the Contractor, Bureau of Construction, Division of Operations and the local municipality, as appropriate. The meeting will serve to determine and document the work required by the Contractor prior to the winter maintenance season and the responsibilities of all the parties during that season. Should the Contractor fail to perform the required work in advance of the winter maintenance season, all costs for maintenance of the roadway to accommodate the safe flow of traffic during that period whether work is suspended or not shall be borne by the Contractor, including all snow removal costs.

**104.08 Rights In and Use of Materials Found on the Project.** The Engineer may authorize the use of materials found in the limits of excavation that are suitable for completing bid items of work. The Contractor will be paid both for the removal of the material at the corresponding Contract unit price and for the pay item for which the removed materials are used.

The removed material shall be replaced with acceptable material at no cost to the Department. No charge for the materials used will be made against the Contractor. Material shall not be excavated or removed from within the highway Right-of-Way that is not within the grading limits without written authorization from the Engineer. Material authorized to be removed outside the grading limits may be subject to compensation from the Contractor at an agreed price at the time of authorization. Replacement material covered under this Subsection shall be compacted to the density requirements specified for roadway embankment construction.

It is expressly understood that the Contractor cannot make claim for damages or for anticipated profits on account of the expected use of any materials shown on the Plans as existing and later found to be nonexistent or unfit for use.

Unless otherwise provided, the material from any existing old structures scheduled for demolition or removal may be used temporarily by the Contractor in the erection of the new structure. Such material shall not be modified or otherwise damaged without approval.

Unless otherwise specified herein, or except as stated in 202 and 502, the Contractor shall not take title to structures found on the highway. Such structures, including but not limited to catch basin frames and grates, drop inlet frames and grates, and manhole frames and covers, curbing, beam guardrail, guardrail fittings, pipe, traffic control devices, and all other materials designated to be salvaged, unless otherwise specified or directed, shall be carefully salvaged and stored within approved portions of the right-of-way for loading by the Contractor onto State owned vehicles as directed. Care shall be taken

during removal operations so as not to damage any salvaged materials. The Contractor shall remove and dispose of existing guardrail on abandoned sections of the highway as directed.

Structures and obstructions no longer an integral part of the work and not designated or directed for salvage, including guardrail post, railroad ties, delineators, markers, cables, wire, light pole bases, signs, fence, gates, and any other visible obstruction to the Work, shall become the property of the Contractor and who shall use, recycle or dispose of them at his discretion at no expense to the State.

Removal and disposal of man-made materials which are not visible or designated for removal found within the limits of the project and that are not suitable for fill within the limits of the project or at a disposal site in accordance with 106.10, shall be the responsibility of the Contractor. Payment for such removal and disposal will be according to 109.04. All other work under this section, unless specifically provided for herein, or in other sections of the Contract, will not be paid for separately, but shall be considered as subsidiary.

**104.09 Final Cleaning Up.** Before final inspection and acceptance of the Work, the Project, borrow, and local material sources and all areas occupied by the Contractor in connection with the Work shall be cleaned of all rubbish, excess materials, temporary structures, and equipment and all parts of the Work shall be left in an acceptable condition. The cost of final cleanup shall be incidental to other items and no separate payment will be made.

**104.10 Restoration of Surfaces Opened by Permit.** Any individual, firm or corporation may be issued a permit by the proper authorities for entering the Project for the purpose of constructing or reconstructing any utility service. The Contractor shall allow the permit holder to enter and work within the Project limits for this purpose.

When ordered by the Engineer, the Contractor shall make necessary repairs due to the permit holders work. The repairs will be paid for as Extra Work, or as provided in the Contract, and will be repaired to the same standards as original work performed.

**104.11 Railway-Highway Provisions.** If the Contract requires that materials be hauled across the tracks of any railway, the Department will arrange with the railway for use of new crossings or any existing crossings. If the crossings other than those specified in the Contract are used, the Contractor shall make arrangements for the use of the crossings.

Work performed on the railway Right-of-Way shall be performed without interfering with the movement of trains or traffic of the railway company. The Contractor shall prevent accidents, damage, or unnecessary delay or interference with the railway trains or other property. If work on the railway Right-of-Way is to be performed by both the Contractor and railway company, the Contractor shall coordinate the Contract work activities with the railway company work forces and schedule.

The Contractor shall secure from the railroad flagging service for the protection of railroad traffic during the progress of work by the Contractor on, over, under, or adjacent to the tracks of the railroad. The Contractor shall reimburse the railroad for the expense of such service.

If the railroad grants the Contractor's request for any temporary crossing or any temporary crossing is ordered by the Department's Bureau of Rail and Transit, the Contractor shall assume the cost of installing, maintaining, removing, and protecting such temporary crossing. The type and method of protection of the crossing and the insurance required shall be as determined by the railroad.

**104.12 Construction Over or Adjacent to Navigable Waters.** Work over, on, or adjacent to navigable waters shall be conducted without interfering with free navigation of the waterways and so that the existing navigable depths will not be impaired except as allowed by permit issued by the U.S. Coast Guard or the U.S. Army Corps of Engineers, as applicable.

**104.13 Contractor's Responsibility for Work.** Until Acceptance of the project by the Engineer, the Contractor is responsible for and shall protect the Work against injury or damage from all causes

## SECTION 104

whether arising from the execution or the nonexecution of the Work except as provided in Subsection 104.07.B.1.

The Contractor, at his or her expense, shall rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the Work from any cause before Acceptance, except for loss, injury or damage due to causes not under the control and without the fault or negligence of the Contractor. Causes not under the control of the Contractor include, but are not restricted to the following:

- A. **Damage by Occurrence.** This includes damage to the work in progress that is caused by natural disasters such as earthquake, tidal wave, tornado, hurricane, or other cataclysmic phenomenon of nature; acts of a public enemy; and acts of governmental authorities.
- B. **Damage by Public Traffic.** This includes damage to any permanent element of the highway which is completed to the stage of serving its intended function and is subsequently damaged by public traffic. It also includes damage to temporary impact attenuation devices during winter suspension.

The Contractor shall repair damage due to such excepted causes and shall be paid at the contract prices or in the same manner as Extra Work in accordance with 109.04 as determined and ordered by the Engineer. The Contractor will be reimbursed for damage caused by public traffic (not by vandalism or the Contractor's equipment) if unsuccessful in collecting the cost of repair from the responsible party. In order to be reimbursed, the Contractor must have made every reasonable effort to collect the costs from the person or persons responsible for the damage. A reasonable effort will be considered to have been made if the Contractor certifies that the law enforcement agency having jurisdiction has been contacted in order to obtain the identity of the responsible person or persons, has corresponded in writing via certified mail with the responsible party and or his/her insurance company if this information is available, and has failed to recover the cost of damages in spite of these efforts.

In case of suspension of the Work from any cause, the Contractor is responsible for the Work under the Contract and shall prevent damage to the project, provide for normal drainage, and erect necessary temporary structures, signs, or other facilities. The Contractor shall also maintain in an acceptable growing condition all living material in newly established plantings, seedings, and soddings furnished under the Contract, and protect new tree growth and other designated vegetative growth against injury. When work is suspended for reasons delineated in Subsection 104.07.B.2, the costs during the period of suspension shall be borne by the Contractor.

**104.14 Environmental Protection.** The Contractor shall comply with all Federal, State, and local laws and regulations controlling pollution of the environment. Pollution of streams, lakes, ponds and reservoirs with fuels, oils, bitumens, chemicals, suspended silt, or other harmful materials and pollution of the atmosphere from particulate and gaseous matter shall be avoided to the extent practicable. Detailed requirements implementing this policy are outlined in Section 107 and contract documents.

**104.15 Value Engineering Change Proposals by the Contractor.** The Contractor is encouraged to use his ingenuity and experience to develop and offer any Value Engineering Change Proposal (VECP) to the Department for alternative construction designs, methods, procedures and other innovations that result in a lower total cost, improved quality, or both. It is the intent of this provision to share with the Contractor any direct cost savings as a result of VECP(s) generated by the Contractor and approved by the Department. Any cost savings generated to the Contract as a result of a VECP shall be shared equally between the Contractor and the Department.

Bid prices shall not rely on the anticipated approval of any VECP(s) by the Department. If a VECP is rejected, the Work shall be completed per the Contract requirements at the bid prices. VECP(s) shall only be submitted by the Contractor after the Contract is awarded.

If the Department determines that the time for response indicated in the submittal under item C.5. below is insufficient for review, the Contractor will be promptly notified. Based on the additional time

needed by the Department for review and the affect on the Contractor's schedule occasioned by the added time, the Department will evaluate the need for a noncompensable delay adjustment to the Contract.

The Contractor shall have no claim against the Department for compensable or noncompensable delay to the Contract based on the failure to respond within the time indicated in item B.5 or C.5. below in the submittal if additional information is needed to complete the review.

- A. VECP(s) that will be considered are those contemplated to produce a savings to the Department without impairing essential functions and characteristics of the facility including but not limited to, service life, economy of operation, ease of maintenance, desired appearance, safety, and impacts to the traveling public or the environment during and after construction.
- B. Submittal of a Conceptual Proposal for VECP(s) that require a significant amount of design or other development resources, the Contractor may submit a Conceptual Proposal for preliminary evaluation. The Engineer will evaluate the information provided and advise the Contractor if any conditions or parameters of the Conceptual Proposal are found to be grounds for rejection. Preliminary review of a Conceptual Proposal reduces the Contractor's risk of subsequent rejection but does not commit the Department to eventual approval of the full VECP.
  - 1. A statement that the proposal is submitted as a Conceptual VECP
  - 2. A general description of the difference between the existing Contract and the proposed change, and the advantages and disadvantages of each, including effects on cost, service life, economy of operation, ease of maintenance, desired appearance, safety, and impacts to the traveling public or the environment during and after construction.
  - 3. A set of conceptual plans and description of the proposed changes to the Contract requirements.
  - 4. An estimate of the anticipated cost savings
  - 5. When a response to the Conceptual VECP by the Department is required.
  - 6. Amount of time necessary to develop a Full VECP.
  - 7. Date by which a Contract Change Order must be executed to obtain the maximum benefit from the VECP.
  - 8. The effect the VECP will have on the completion dates in the Contract
- C. Submittal of Full VECP. The following materials and information shall be submitted with each Full VECP.
  - 1. A statement that the proposal is submitted as a Full VECP.
  - 2. A description of the difference between the existing Contract and the proposed change, and the comparative advantages and disadvantages of each including effects on service life, economy of operations, ease of maintenance, desired appearance, safety and impacts to the traveling public or the environment during and after construction.
  - 3. A complete set of plans and specifications showing the proposed revisions relative to the original Contract features and requirements. The Department requires a NH Professional Engineers stamp and signature on any engineering changes.
  - 4. A complete cost analysis indicating the final estimate costs and quantities to be replaced, compared to the new costs and quantities generated by the VECP, and the cost effects of the proposed changes on operational, maintenance, and other considerations.
  - 5. A statement specifying the date by which a Change Order adopting the VECP must be executed so as to obtain the maximum cost reduction during the remainder of the contract.
  - 6. A proposed revised project schedule illustrating the impacts of the VECP on the Contract completion date(s) and any other milestone dates.
  - 7. A description of any previous use or testing of the VECP and the conditions and results therewith. If the VECP was previously submitted on another Department project, indicate the date, Contract number, and the action taken by the Department.
- D. Conditions. VECP(s) will be considered only when all of the following conditions are met:
  - 1. VECP(s), approved or not approved by the Department, apply only to the ongoing Contract(s) referenced in the Proposal and become the property of the Department. The



## SECTION 104

VECP(s) shall contain no restrictions imposed by the Contractor on their use or disclosure. The Department has the right to use, duplicate and disclose in whole or in part any data necessary for the utilization of the VECP. The Department retains the right to utilize any accepted VECP or part thereof on any other or subsequent projects without any obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.

2. If the Department is already considering certain revisions to the Contract, or the Standard Specifications, or has approved certain changes in the Contract for general use which are subsequently incorporated in a VECP, the Department will reject the VECP and require the Contractor to proceed without any obligation to the Contractor.
3. The Contractor shall have no claim against the Department for additional costs or delays resulting from the rejection of a VECP, including but not limited to, development costs, loss of anticipated profits, increased material or labor costs.
4. The Department will determine if a VECP qualifies for consideration and evaluation. It may reject any VECP that requires excessive time or costs for review, evaluation, and/or investigations, or which is not consistent with the Department's design policies and basic design criteria for the Project.
5. The Engineer will reject all or any portion of work performed under an approved VECP if unsatisfactory results are obtained. The Engineer will direct the removal of such rejected work and require construction to proceed under the original Contract requirements without reimbursement for any work performed under the VECP, and/or for removal of that work. Where modifications to the VECP are approved to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the Contract bid prices as if the work were constructed under the original Contract requirements. The rejection or limitation of reimbursement shall not constitute the basis of any claim against the Department for delay or for any other costs.
6. The VECP proposed work shall not contain experimental features but shall be proven features that have been used under similar or acceptable conditions on other projects or locations acceptable to the Department.
7. VECP(s) will not be considered if equivalent options are already provided in the Contract documents.
8. The savings generated by the VECP must be sufficient to warrant review and processing.
9. A VECP changing the type or thickness or both type and thickness of the pavement structure will not be considered. Also, any VECP that solely substitutes one material for another will not be considered.
10. Additional information needed to evaluate VECP(s), shall be provided in a timely manner. Untimely submittals of additional information will result in rejection of the VECP. Where design changes are proposed, the additional information could include results of field investigations and surveys, design computations, and field change sheets.
11. Approval or disapproval of a VECP on one Contract does not guarantee approval or disapproval on another Contract.
12. Approval of the Conceptual VECP in no way obligates the Department to approve the Full VECP.
13. No work related to a VECP shall be performed under Force Account. Agreed prices must be determined for all pay items related to the VECP before it is approved.
14. VECP(s) that only reduce or eliminate Contract pay items will not be considered.
15. If the VEP creates a significant change as defined in 104.03 that would not have otherwise resulted, the Contractor has no claim for additional compensation as provided for in 104.03.

- E. Payment. If the VECP is accepted and approved, the changes and payment will be authorized with a Change Order. Reimbursement will be made as follows:

1. The changes will be incorporated into the Contract by changes in quantities of unit bid items, and/or new agreed price items, as appropriate, under the Contract.
2. The cost of the revised work as determined from the changes will be paid directly. In addition, the Department will pay the Contractor 50 percent of the savings to the Department as reflected by the difference between the cost of the revised work and the cost of the related construction required by the original Contract computed at Contract bid prices.
3. The cost for development, design, and implementation of the VECP are not eligible for reimbursement.
4. The Contractor may submit VECP(s) for an approved Subcontractor. Subcontractors may not submit a VECP(s) except through the Contractor.
5. VECP payments are for direct savings or costs. Indirect saving or costs (time, user costs, etc.) will not be included in payment calculations.

### ***SECTION 105 -- CONTROL OF THE WORK***

**105.01 Authority of the Engineer.** The Engineer will decide all questions regarding the quality and acceptability of materials furnished, work performed, the rate of progress of the Work, the interpretation of the Contract, and the acceptable fulfillment of the Contract by the Contractor.

The Engineer will suspend the Work, wholly or in part, for such periods as may be necessary for the Contractor's failure to correct conditions unsafe for the Project personnel or general public, or carry out provisions of the Contract, or carry out orders of the Engineer.

Work may also be wholly or partially suspended for periods necessary due to existing or forecasted unsuitable weather, or for conditions considered unsuitable for the prosecution of the Work such as hazardous materials, directives of the New Hampshire Department of Environmental Services, Air Resources Division, implementing emergency episode procedures, or any other condition or reason deemed to be in the Department's interest.

**105.02 Plans and Working Drawings.** Plans typically include lines, grades, typical sections, cross sections or site plans with contours, location and details of structures and a summary of items appearing on the Proposal. The approved plans on file at the Department will show the location, detail, and dimensions of the work.

Plans shall be supplemented by Contractor prepared working drawings as found necessary to control the Work and its prosecution. Working drawings consisting of details that are not included in the Plans but required for the Work shall be furnished to the Department. Manufacturer's engineering data for prefabricated material, including that for falsework and forms, shall be furnished with each set of working drawings.

The Contractor shall submit to the Engineer for approval or documentation the required Working Drawings. Copies of any calculations required to prepare the Working Drawings shall be furnished with the drawings. Working Drawings shall be submitted in the same units as the project or dual units with metric (SI) unit followed by the English unit in parentheses. The Working Drawings shall be furnished well in advance of the Work to allow the Engineer time to review or distribute the working drawings. Any work done or materials ordered for work shown on the working drawings prior to approval or distribution of the drawings shall be at the Contractor's risk.

Working drawings submitted for approval shall include, but not be limited to; the following:  
 shop fabrication drawings (3 sets),  
 bending diagrams when required for reinforcing steel (3 sets),

## SECTION 105

### Storm Water Pollution Prevention Plan (4 sets),

or any other working drawings for approval required by the Contract. The Contractor shall submit the required sets of working drawings for approval to the Engineer for review. The Engineer will be allowed up to fifteen (15) working days for review of each submission. If the Engineer has not responded to the Contractor after fifteen working days, the Contractor shall contact the Engineer to inquire about the status of the submittal. If the Engineer requires more time for review, the delay will be considered a Noncompensable Delay, and the Contract Time will be extended in accordance with 108.07. Each resubmission including requests for additional information will be treated as a new submission and may require up to fifteen (15) working days for review by the Engineer. The fifteen working days will begin upon arrival at the Bureau of Construction's main office. The review will be considered complete when the date and status has been placed on the submittal. One set of the drawings will be returned to the Contractor marked approved or with corrections to be made. After approval has been given, the Contractor shall supply the Engineer with six sets, or seven sets if a design consultant is involved in the project, of the revised Working Drawings.

Working drawings submitted for documentation shall include, but not be limited to; the following:

- Progress Schedules,
- temporary bridge plans,
- removal of existing bridge structure plans,
- cofferdam plans,
- water diversion structure plans,
- plans of precast elements to be designed by the Contractor,
- erection plans,
- temporary support systems,
- falsework plans,
- scaffolding plans and bridge analysis,
- detour plans,
- sign structure plans,
- traffic signal poles and mast arm plans,

or any other working drawings for documentation required by the Contract. Working Drawings for documentation shall be prepared, stamped and signed by a Licensed Professional Engineer licensed in the State of New Hampshire. The Contractor shall submit five sets of working drawings for documentation to the Engineer for distribution a minimum of fifteen working days prior to commencing work shown on the working drawings. Working drawings for documentation will be placed in the Department's project files as a record of the Contractor's method of operation. The Department reserves the right to comment to the Contractor regarding the content of the various working drawings.

The Contract price will include the cost of furnishing all Working Drawings

The Contractor may propose detours not shown on the Plans. The Contractor shall submit proposed detour plans in triplicate for approval, which shall show the proposed location, layout, grade, typical cross section, protective fixtures and signing.

The Engineer's receipt for documentation or distribution of the Contractor's Working Drawings will not relieve the Contractor from responsibility under the Contract for errors in dimensions, incorrect fabrication and erection processes, design requirements specified or successful completion of the Work.

**105.03 Conformity with Plans and Specifications.** Work performed and materials furnished shall be uniform in character and meet the Contract dimensions and material requirements according to tolerances specified in the Contract. If tolerances are specified, deviations beyond the specified limits will be unacceptable. When tolerance limits are not specified, and only single dimensions are indicated, such dimensions are to be regarded as nominal dimensions.



If the materials furnished, work performed, or the finished product does not conform with the Contract, but adequately addresses the design purpose, the Engineer will determine the conditions under which the Work will be accepted and allowed to remain in place unless there are other provisions in the Contract that provide for this determination. Where this determination is made by the Engineer rather than Contract provisions, the Engineer will document the basis of acceptance by Contract modification. The modification will provide for an appropriate adjustment in the Contract price for such work or materials as necessary to support the Engineer's determination.

If the materials, work performed, or the finished product do not conform with the Contract and results in an unsatisfactory or unacceptable product, the work or materials shall be removed and replaced or otherwise corrected to the satisfaction of the Engineer, and at the Contractor's expense.

If there are provisions in the Contract (QC/QA provisions) for the acceptance of material or work that is not in full compliance with the minimum requirements stated, the use of pay adjustment factors reflecting the payments to be made for the Work or Materials will be included in the applicable Subsection concerning method of measurement and basis of payment or in a separate Subsection.

**105.04 Coordination of Plans, Specifications, Supplemental Specifications, and Special Provisions.** The Specifications, Supplemental Specifications, Plans, Special Provisions, other special Contract requirements and all supplemental documents are essential parts of the Contract and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Contract. In case of discrepancy between these Contract documents, calculated dimensions, unless obviously incorrect, will govern over scaled dimensions and the parts of the Contract will prevail in the following descending order:

Special Contract Requirements \*  
 Special Provisions  
 Plans  
 Supplemental Specifications  
 Standard Specifications  
 Standard Details  
 Standard Plans

\* Including, but not limited to, Prosecution of Work, Traffic Control Plan and Special Attentions in the mentioned descending order.

The Contractor shall not take advantage of any apparent error or omission in the Contract. If an error or omission is discovered, the Engineer shall be promptly notified so corrections and interpretations necessary to fulfill the intent of the Contract can be made.

When general reference is made on bridge plans to "AASHTO Specifications," it shall refer to the publication of AASHTO entitled "Standard Specifications for Highway Bridges." The reference shall be to the current edition of such specifications or the latest revision thereof or interim specifications adopted and in effect on the date of invitation for bids.

**105.05 Cooperation by the Contractor.** With the exception of the Standard Specifications and Standard Plans, the Contractor will be supplied with a minimum of two sets of the Contract. The Contractor shall keep one set available on the Project at all times.

The Contractor shall give the Work the constant attention necessary to facilitate progress, and shall cooperate with the Engineer, Department inspectors, and other Contractors.

The Contractor shall have on the project site, at all times when the Work is being performed, a competent English-speaking Superintendent or other authorized representative in responsible charge of the Work. Said individual shall be thoroughly qualified and fully authorized to execute the responsibilities of a Superintendent as described herein. The individual shall not be an owner, employee or have any affiliation with any firm which is acting as a Subcontractor on the project. The

## SECTION 105

Superintendent shall receive instructions from the Engineer or authorized representatives, be authorized to act for the Contractor as agent on the Work and have full authority to execute orders or directions of the Engineer without delay.

The Contractor shall promptly supply, irrespective of the amount of work sublet, the necessary Materials, equipment, tools, labor, and incidental items to complete the Contract.

Should the Contractor, or any of its duly authorized representatives, fail to cooperate to the extent that the integrity of the Work is compromised, or the safe prosecution of the Work is jeopardized, the Engineer may immediately suspend all Work. Any unsafe conditions will be corrected by the Contractor and the uncooperative person or persons shall be removed from the Project before the resumption of the Work. The inability to rectify the situation may result in the termination of the Contract in accordance with the provisions of 108.11.

**105.06 Cooperation with Utilities.** Utility items that are to be relocated or adjusted by the utility, others, or the Contractor will be shown in the Contract.

All utility facilities and appurtenances within the construction limits will be shown on the Plans and relocated or adjusted at the utility owners expense, unless otherwise specified. The locations of these utilities are as provided by the utility owners and may not be exact, particularly with regard to underground installations. Contractor work procedures are to account for the inaccuracy inherent in the representation of their location. Attention is directed to the possible existence of underground facilities not known to the Department.

New Hampshire State Law, RSA 374:48-56, requires that anyone who excavates in a public way or utility easement must notify the utility damage prevention system, DIG-SAFE, at least 72 hours prior to starting work.

The Contractor shall be responsible to notify the DIG-SAFE Call Center (Tel. No. 1-888-DIG SAFE (1-888-344-7233) at least 72 hours in advance of starting any excavation or erecting permanent construction signing. Saturdays, Sundays and legal holidays are not to be included in the computation of the required 72 hour notice.

The Contractor shall provide the Engineer with the date, time, numbers assigned and the name of the person answering the call at the DIG-SAFE Center.

Notice of intent to excavate cannot be made more than 30 days prior to actual work. All utility facilities within the proposed Work, including advance construction sign locations, should be identified and marked prior to construction. Suspension of the Work for more than 30 days at any time will require re-notification of the DIG-SAFE Center to ensure validity of markings and to protect interim utility construction.

The Contractor shall provide sufficient lead time to allow for Contractor layout of advance permanent construction signs and excavation areas prior to the start of 72-hour period required by DIG-SAFE.

The Contractor shall additionally notify municipal and privately owned utilities to identify, locate and mark their facilities separately from those to be located through the DIG-SAFE system.

Once located and marked, the Contractor shall maintain all utility markings and provide access to any and all installations to permit repairs and maintenance of service as needed.

The Contractor shall cooperate with utility owners in the removal and rearrangement of underground or overhead utility facilities to minimize interruption to utility services and duplication of work by the utility owners.

Facilities or appurtenances that are to remain in place during construction shall be accounted for and protected by the Contractor's work procedures. The fact that any underground facility is not shown upon the plans shall not relieve the Contractor of its responsibility under this Section. At points where the Contractor's operations are adjacent to properties of railway, telecommunications, gas, and electric power companies, and other utilities, or are adjacent to other property where damage might result in considerable expense, loss, or inconvenience, Work shall not commence until all arrangements necessary for the protection thereof have been made.

The Department will notify all utility companies, pipe line owners, or other parties affected by the Work and have all necessary adjustments of the public or private utility fixtures and appurtenances within or adjacent to the construction limits made as soon as possible.

In the event utility services are interrupted as a result of damage within the Limits of Construction, the Contractor shall notify the appropriate utility authorities and cooperate with them until service has been restored. Work shall not commence around fire hydrants until provisions for continued service have been made and approved by the local fire authority.

Repairs to damaged utilities caused by carelessness or omissions on the part of the Contractor shall be corrected at the Contractor's expense. The damaged facilities shall be restored to a condition similar or equal to that existing before the damage occurred.

It is understood and agreed that the Contractor has considered in its bid all of the permanent and temporary utility facilities in their present or relocated positions as shown on the Plans and as evident on the site, and that no additional compensation will be allowed for any delays, inconvenience, or damage sustained due to any interference from such utility facilities or the operation of moving them. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified above shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

Should the Contractor desire to have any rearrangement made of any utility facility, or other improvement, for the Contractor's convenience in order to facilitate construction operations, which rearrangement is in addition to or different from, the rearrangements indicated on the Plans or in the Special Provisions, the Contractor shall make whatever arrangements are necessary with the owners of such utility or other non-highway facility for such rearrangement and bear all related expenses.

If utility facilities or appurtenances are found that are not noted in the Contract documents, the Engineer will determine whether adjustment or relocation of the utility is necessary to accommodate construction and proceed to make necessary arrangements with the utility owner or the Contractor if the work necessary is not otherwise specified. Additional compensation due the Contractor whether compensatory or noncompensatory will be provided for under Section 104.

**105.07 Cooperation Between Contractors.** The Department reserves the right at any time to contract for and perform other or additional work on or near the Work covered by the Contract.

When separate contracts are let within the limits of any one project or on adjacent projects, each Contractor shall conduct the Work without interfering or hindering the progress or completion of the work by other Contractors. Contractors working on the same project or adjacent projects shall cooperate with each other in a manner to serve the best interest of the State. In case of any unavoidable interference, the Engineer will determine priorities.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with the Contract and shall protect and save harmless the Department from damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange the Work and place and dispose of materials being used without interfering with operations of the other Contractors within the limits of the same project or on adjacent projects. The Work shall be coordinated with the work and sequence of other Contractors.

**105.08 Construction Stakes, Lines, and Grades.** The Engineer will set stakes and furnish data necessary to establish the line and grade of the finished surface, the lines and grades of all waterways and structures, and such other points and bench marks as are necessary to lay out the Work correctly. This "initial" layout will include control points, bench marks, line ties, and leveled side stakes as required for grade control and reproduction of construction center line. It will also include bridge targets, line ties and reference stakes for bridges, retaining walls, and full span overhead sign structures.

## SECTION 105

The Engineer will take cross sections as required to complete measurement of quantities as provided in 109.01. This work includes reference points, base lines, stakes, bench marks, and cross sections for borrow pits where applicable.

The Engineer will stake and reference all required Rights-of-Way, easement limits and bounds.

The Contractor shall cooperate in the setting and shall be responsible for the preservation of all "initial" layout stakes and marks, and if any of the construction stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost of replacing them will be charged against the Contractor and will be deducted from the payment for the work. Damaged or destroyed points, bench marks or stakes or any reference points damaged or made inaccessible by the progress of the construction shall be replaced or transferred by the Contractor, subject to verification by the Engineer. Replacement of all "initial" layout (with the exception of side stakes or drainage reference stakes) shall be performed by or under the direction of a Licensed Land Surveyor.

The Contractor shall perform all necessary layout work not specified above in order to construct all elements of the Project as shown on the Plans and specified in the Contract. This work shall include, but shall not be limited to stakeout necessary for re-establishment of line and grade as earthwork operations progress; stakeout, layout, and elevations as required for structures, forms, pile layouts, and paving. Prior to paving, the Contractor shall perform all work necessary to set the blue top stakes for fine grading.

The Contractor shall perform all required layout work with competent, qualified personnel to meet minimum Third-order, Class I survey accuracy and procedures (Horizontal: 1 in 10,000, Vertical: 0.05 ft (2.0 mm) X  $\sqrt{\text{distance in miles (kilometers)}}$ ). Any error, apparent discrepancy, or absence of data in the Department's "initial" layout shall be referred to the Engineer in writing for correction or interpretation. The Contractor is solely responsible for the accuracy of the Work. All computations necessary to establish the exact position of the Work from control points, shall be made and preserved by the Contractor. All computations, notes and other records necessary to accomplish the Work shall be neatly made. Such computations, notes and other records shall be made available to the Engineer upon request.

The Engineer may check all or any portion of the layout, stake-out or notes made by the Contractor. Any necessary correction to the Work shall be made immediately by the Contractor. Such checking by the Engineer will not relieve the Contractor of any responsibilities for the accuracy or completeness of the work. Rechecking, by the Engineer, of any portion of the Contractor's layout, stakeout or notes will be charged against the Contractor and will be deducted from the payment for the work.

No claim will be considered because of alleged inaccuracies unless the Contractor notifies the Engineer thereof in writing immediately upon discovery of the alleged inaccuracies and affords the Engineer opportunity to check or verify the stakes or marks in question.

**105.08.1** No work to establish line and grade will be provided by the Department on resurfacing areas.

**105.08.2** On recycling or reclamation areas the Department will not establish line and grade. The Contractor shall supply all material and perform all work to determine the existing line and grade and cross-slopes prior to recycling or reclamation work and establish finished line, grade and cross-slopes. Original plans and computed cross-slopes at curves will be provided by the Engineer.

The Contractor shall determine and lay out, with survey instruments, the finished alignment at 20-meter (50-foot) intervals including all horizontal curve points (PC, PI, PT, spiral to curve (SC), spiral to tangent (ST), and POC as required). The Contractor shall lay out and set all grade control necessary to complete the final grading.

**105.09 Authority and Duties of Representatives of the Engineer.** As the direct representative of the Engineer, the Contract Administrator has immediate charge of the engineering details of each construction project and is responsible for the administration and satisfactory completion of the Project. The Engineer may appoint such representatives as desired. All representatives have authority to give directions pertaining to the Work or to the safety and convenience of the public, to approve or reject

materials, to suspend any work that is being improperly or unsafely performed, to make measurements of quantities, to keep records of costs, and otherwise represent the Engineer. The Contractor may, however, appeal their decision to the Engineer, but any work done pending resolution is at the Contractor's own risk.

Except as permitted and instructed by the Engineer, the representatives are not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, nor to issue instructions contrary to the Contract. They are not authorized to act in a supervisory capacity for the Contractor or to interfere with the management of the Work by the Contractor. Any advice which the assistants or representatives of the Engineer may give the Contractor shall not be construed as binding the Engineer or the Department in any way, nor releasing the Contractor from the fulfillment of the terms of the Contract.

All transactions between the Contractor and the representatives of the Engineer that are subject to protest or where payments are involved shall be made in writing.

**105.10 Inspection of Work.** Materials and each part or detail of the Work shall be subject to inspection by the Engineer. The Engineer shall be allowed and provided safe access to all parts of the Work and shall be furnished with information and assistance by the Contractor as required to make a complete and detailed inspection.

The Contractor shall remove or uncover such portions of the finished Work if directed by the Engineer. After examination, the Contractor shall restore the Work to the standard required by the Contract. Should the Work prove acceptable, the uncovering, removing, and the replacing of the covering or making good of the parts removed will be paid for as Extra Work. Should the Work prove unacceptable, the uncovering, removing, and replacing of the covering or making good the parts removed, shall be at the Contractor's expense.

Work done or materials used without supervision or inspection by an authorized Department representative may be ordered removed and replaced at the Contractor's expense, unless the Department representative failed to inspect the Work after having been given reasonable notice in writing that the Work was to be performed.

When any unit of government or political subdivision, utility, or any corporation is to accept or pay for a portion of the Contract cost or has an interest in the Work for other reasons, its representatives shall have the right to inspect the Work. The inspection by these agencies does not make them a party to the Contract nor will it change the rights of the Contract parties.

**105.11 Removal of Unacceptable and Unauthorized Work.** Work that does not conform to the Contract requirements will be considered unacceptable, unless accepted under the provisions of 105.03.

Unacceptable Work, whether the result of poor workmanship, use of defective or unapproved materials, damage through carelessness, or any other cause found to exist before Acceptance of the Work, shall be removed and replaced at the Contractor's expense.

Work done contrary to instructions received from the Engineer, or beyond the Limits of Construction except as specified or Extra Work done under 109.04 without permission of the Engineer is considered unauthorized and will not be considered for payment. Corrective work meeting the Contract provisions shall be at the expense of the Contractor. If corrective work prosecution ordered by the Engineer is not provided, the Engineer has the authority under this Subsection to have the unacceptable work removed and remedied by others and to deduct the cost of the work by others from the moneys due the Contractor.

**105.12 Construction Zone(s).** Pursuant to the authority granted the Commissioner of Transportation under RSA 266:20, construction zones are established in accordance with the following:

A construction zone will be established for any highway or related part thereof designated for construction, reconstruction, or repair by the Department.

For the purpose of definition, the limits of the Construction Zone(s) will be the beginning and end of the designated Project, or portions thereof, including approaches and connections as denoted within the Contract Special Provisions. The Construction Zone will become effective at the time the construction signs are erected and will remain in force until the signs are removed.

## SECTION 105

Use of construction and maintenance equipment within limits of Construction Zone(s) will be as allowed in 105.13.

Extension of the Construction Zone outside the limits noted above may only be granted upon written request and issuance of a Construction Zone extension permit. The permit will expire upon removal of the construction signs, as noted above, or by letter from the Engineer, if conditions warrant an earlier suspension. (Extensions of the Construction Zone will not be permitted on the Interstate System due to the vehicle weight limitations of Federal law 23 USC 127.)

### **105.13 Load Restrictions.**

A. **Outside Construction Zone Limits.** The Contractor's hauling and construction equipment shall not exceed the legal or posted gross loads for any bridge or highway being used outside a Construction Zone as referenced in 105.12.

B. **Within Construction Zone Limits.**

1. **On New or Existing Pavements.** Trucks or equipment hauling loads in excess of legal loads shall be certified per RSA 266:18-d to the weight limitations of RSA 266:18-b. Without written authorization from the Engineer, heavy "off-road" hauling equipment shall not be allowed on pavement that is (or will be subject to use as) a public highway. When such highways are in use by the Contractor and the public, authorization will be contingent upon an approved clear zone or approved physical barrier between construction equipment and the public.
2. **On New or Existing Bridges.** Gross loads in excess of the legal gross loads will not be allowed unless authorized in writing by the Engineer. Requests for such authorization shall be in writing and shall indicate the length of the vehicle, the type and amount of gross load with the location and the load distribution to each axle. Authorization will specify the maximum speed and location of loads relative to the centerline of the bridge.

New concrete bridge decks shall be closed to traffic, including the Contractor's trucks and equipment, for a period of time as specified in 520.3.11.2.1 with the following exception:

Lightweight vehicular loads weighing less than 6,000 lb (2720 kg) GVW will be allowed after the concrete test cylinders have attained 80 percent of the minimum compressive strength of the specified deck concrete. Heavier loads may be permitted upon written request and authorization in the same manner as for gross loads in excess of the legal gross loads.

C. **General.** The Contractor shall not operate equipment of such type, weight or so loaded as to cause any damage to structures, to the roadway, or to any other work. Hauling of materials over the pavement base course or surface course under construction shall be subject to approval by the Engineer. The Contractor shall be responsible for all damage done by the Contractor's equipment. No permit or approval will relieve the Contractor of liability for damages.

It is specifically called to the Contractor's attention that highways not on the State system are the property of the municipality within which they are located. Such highways are maintained and regulated by the municipal authority. Prior to subjecting such highways to heavy construction loads and equipment, the Contractor shall secure the written consent of the proper municipal authority. During the use of these highways, the Contractor shall maintain them in a condition satisfactory to the authorities and safe for the traveling public. Damage attributed to hauling operations shall be repaired by the Contractor to the satisfaction of the proper authorities.

**105.14 Maintenance of Work During Construction.** The Contractor shall maintain the Project work site in a satisfactory condition until the project is accepted. This maintenance shall consist of continuous and effective work prosecuted day-by-day.

The Contractor shall take every reasonable precaution against spillage of construction materials on existing highways and bridges. The Contractor's attention is called to "Spillage of Material" under

107.01. If spillage does occur, the Contractor shall remove such spillage immediately after its occurrence. Particular care shall be taken to see that bridge deck and approach surfaces are kept as smooth as possible and free from all stone, gravel, or any other material which would increase impact or would damage the finished bridge or approach surfaces.

Maintenance shall include, but not be limited to, mowing grass, and cleaning and maintenance of erosion control and drainage structures.

The Engineer will immediately notify the Contractor of failure to meet these provisions. If unsatisfactory maintenance is not remedied within 24 hours after receipt of the notice, the Engineer will proceed to maintain the Project. The entire cost of this maintenance will be deducted from moneys due the Contractor.

Once the Contract work involves the placement of material on, or the use of a previously constructed subgrade, base course, pavement, or structure, the Contractor shall maintain the previously constructed work.

All cost of maintenance work during construction and before Acceptance shall be subsidiary to the bid price for other items of work except as outlined in 104.07, 619.3.1.9 and 619.5.1.8.

**105.15 Opening Sections of Project to Traffic.** The Engineer may order certain sections of the Project to be opened to traffic before Completion or Acceptance. Opening these sections shall not constitute acceptance of the Work or a waiver of any Contract provisions.

If the Contractor is late in completing features of the Work according to the Contract or progress schedule, the Engineer will give written notification establishing a time period for completing these features. If the Contractor fails to complete the Work ordered, or make a reasonable effort to complete the Work according to the written notification, the Engineer may order all or a portion of the Project opened to traffic. The Contractor shall not be relieved of liability or responsibility for maintaining the Work and shall conduct the remaining construction operations with minimum interference to traffic without additional compensation for the added cost of the work.

**105.16 Furnishing Right-of-Way.** The Department will acquire all necessary property rights in advance of construction. Any exceptions will be indicated in the Contract.

Material production facilities may be permitted on state-owned property for the production of Materials needed for particular Department projects. Under no circumstances shall state-owned property be used by the Contractor for any business enterprise unless a request is received by the Commissioner and processed in accordance with RSA 4:40, as amended.

**105.17 Project Acceptance.** Acceptance will not occur until Completion of the Project as defined in Section 101. However, at the request of the Contractor and at the discretion of the Engineer, the Contract Time may be stopped without all the required documents, certificates, or proofs of compliance. It must be established that the Contractor could not reasonably or in good faith provide some of the required compliance documentation before incorporating in the Work the Material requiring compliance documentation.

When the Contract Time is stopped, the Contractor is to expeditiously provide the exempted documents, certificates, or proofs of compliance. Acceptance and payment will not be made until all documents, certificates, or proofs of compliance have been executed and delivered to the Engineer.

- A. **Partial Project Acceptance.** When a portion of the Project, such as a structure, interchange, or section of road or pavement is substantially completed, the Contractor may request final inspection of that portion. If the portion has been completed in accordance with the Contract except: (1) the removal of temporary by-passes or other temporary structures that have been erected for the convenience of the traveling public and that do not interfere with the normal use of the roadway, (2) the satisfactory cover and mature growth of grass in seeded areas, or (3) the clean-up of pits, the Engineer may accept the portion as completed and relieve the Contractor from the cost of future maintenance of the designated portion of the Project. Work subsequently required by the Engineer on the accepted portion will be paid for under the



## SECTION 105

pertinent items of the Contract or by Extra Work as determined and ordered by the Engineer. The decision to make partial acceptance of a portion of the Project is solely at the discretion of the Engineer. Partial acceptance does not void or alter any of the terms of the Contract.

- B. **Project Acceptance.** Upon receiving notice from the Contractor of Project Completion, the Engineer will make an inspection. If the Work required by the Contract is found to be complete, the inspection shall constitute the final inspection and the Engineer will notify the Contractor in writing to acknowledge completion of the work.

If unsatisfactory Work is noted, the Engineer will give the Contractor the necessary instructions for correction of such Work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the Work, another inspection will be made that shall constitute the final inspection. If the Work has been satisfactorily completed, the Engineer will provide Acceptance of the Work by notifying the Contractor in writing of the date of final inspection and Acceptance.

**105.18 Claims for Adjustment.** If additional compensation is considered due by the Contractor for work or material not covered in the Contract, written notification of the intent to make claim under 104.06 shall be given to the Engineer before beginning or continuing the affected work.

The Engineer will respond as described under 104.06.C following notification. The Contractor shall provide necessary cooperation and information to the Engineer during the period of notification, review, and evaluation to provide possible resolution of the Contract question and avoid, if possible, further claim process actions.

If notification is not given, or the Contractor does not afford the Engineer the opportunity for keeping strict account of actual cost, the Contractor waives any claim for additional compensation. Notice by the Contractor, and the fact that the Engineer has kept account of the costs shall not be construed as substantiating the validity of the claim. An equitable adjustment will be made to the Contract if the claim is found by the Engineer to have merit. Failure to submit a claim prior to final payment on the Contract shall constitute a waiver of all claims.

- A. Claim submittals shall be in sufficient detail to enable the Engineer to determine the basis for entitlement and the resulting costs. The following minimum information must accompany each claim submitted:
1. Detailed factual statement of the claim providing all dates, locations, and items of work affected by the claim.
  2. The date actions resulting in the claim occurred or conditions resulting in the claim became evident.
  3. The name, title, and activity of each Department employee knowledgeable about facts that gave rise to such claim.
  4. The name, title, and activity of each Contractor employee knowledgeable about facts that gave rise to such claim.
  5. The specific provisions of the Contract that support the claim, and a statement why the provisions support the claim.
  6. The identification of any pertinent documents, and the substance of any material oral communications relating to the claim.
  7. A statement whether the additional compensation or extension of time being claimed is based on the provisions of the Contract or an alleged breach of Contract.
  8. If extension of time is also sought, the specific days for which it is sought and the basis for such claim as determined by an analysis of the construction schedule.
  9. The amount of additional compensation sought and a breakdown of that amount.
- B. **Required Certification Of Claims.**
- The claim submittal shall include the Contractor's written certification, under oath, attesting to the following:
1. The claim is made in good faith.
  2. Supportive data is accurate and complete to the Contractor's best knowledge and belief.
  3. The amount of the claim accurately reflects the Contractor's actual cost incurred.



In complying with this requirement, the Contractor shall use the following form.

### CERTIFICATE OF CLAIM

Under the penalty of law for perjury or falsification, the undersigned,  
 \_\_\_\_\_, \_\_\_\_\_ (Title) of  
 \_\_\_\_\_ (Company) hereby certifies that the claim for extra  
 compensation and time made herein for work on the Contract is a true statement of the actual  
 costs incurred and time sought, and is fully documented and supported under the Contract  
 between the parties.

\_\_\_\_\_  
 (Date)

\_\_\_\_\_  
 (Signature)

Notarized

- C. Review Of Claims. All claims filed will be subject to review by the Department at any time following the claim filing, whether or not the claim is part of a suit pending in the courts of this State. The review may begin on ten days after the Department gives the Contractor written notice of its intent to review the claim. The Contractor, Subcontractor(s), or Supplier(s) shall cooperate with the Department and shall provide at a minimum, access to the following documents:
1. Daily time sheets and foreman's daily reports.
  2. Union agreements, if any.
  3. Insurance, welfare, and benefits records.
  4. Payroll register.
  5. Earnings records.
  6. Payroll tax returns.
  7. Material invoices, purchase orders, and all material and supply acquisition Contracts.
  8. Material cost distribution worksheets.
  9. Equipment records (list of company equipment, rates, etc.)
  10. Vendor rental agreements, and subcontractor invoices.
  11. Subcontractor payment certificates.
  12. Canceled checks (payroll and vendors).
  13. Job cost report.
  14. Job payroll ledger.
  15. General ledger, general journal, (if used) and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals.
  16. Cash disbursement journal.
  17. Financial statement for all years reflecting the operations on this Project.
  18. Income tax returns whether such records are maintained by the company involved, its accountant, or others.
  19. Depreciation records on all company equipment.
  20. All other documents used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment.
  21. All documents that reflect the Contractor's actual profit and overhead during the time the Project was being performed and for each of the five years prior to the commencement of this Project.
  22. All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based.
  23. Worksheets used to prepare the claim, establishing the cost components for items of the claim including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, and all documents that establish the time periods, individuals involved, the hours and the rates for the individuals.

## SECTION 105

**105.19 Resolution of Claims and Disputes.** If the Engineer disapproves additional compensation for work or material, the Contractor may appeal the matter to the Commissioner in accordance with the Department's statutory appeals procedures. The statutory appeals procedures are available from the Office of Hearings and Rules at the Department. Nothing in this subsection shall be construed as establishing any claim contrary to the terms of 104.02.

## *SECTION 106 -- CONTROL OF MATERIAL*

**106.01 Source of Supply and Quality Requirements.** All materials used shall meet the requirements of the Contract. In order to expedite the inspection and testing of materials the Contractor shall notify the Engineer of the proposed sources of materials to be used in the Work before delivery. The Engineer has the option of conditionally approving materials at the supply source. Any material incorporated into the Work which subsequently fails to meet the Contract requirements shall be corrected to the satisfaction of the Engineer or removed. All materials used in the Work shall be new unless otherwise specifically prescribed in the Contract.

**106.02 Local Material Sources.** Possible sources of local materials may be indicated on the Plans and described in the Proposal. Since it is not feasible to determine from natural deposit sampling the acceptable limits for an entire deposit, variations in materials quality within the deposits are to be considered usual and to be expected. The Engineer may order procurement of material from any portion of a deposit and will reject portions of the deposit as unacceptable if the material fails to meet specification requirements.

The Department may make available the right to take materials from designated sources described in the Contract together with the right to use the property as specified, for plant site, stockpiles, and hauling roads. If this procedure has been chosen by the Department, the Contract will define the acquisitions or rights provided.

If material is used from other than Contract designated sources, the Contractor shall comply with the regulations of RSA 155-E, acquire the necessary rights to take materials from the sources and pay all related costs. The Contractor shall submit to the Department a copy of the permit for excavation (required under RSA 155-E) showing that the excavation site has been permitted by the Regulator prior to removing any material from that site.

Where practicable, pits, quarry sites, and access roads shall be located so that they will not be visible from any highway. Pits and quarries shall be excavated so that water does not collect and stand on the site during the work. Following the completion of the work, pits and quarries shall be left in a neat and presentable condition.

For Contractor acquired rights to excavation sites, upon completion of the work, the Contractor shall ensure that the necessary grading and reclamation work as required per RSA 155-E is done. Acceptance of the project will not be made until a written release from the property owner indicates that the agreement conditions with the Contractor have been satisfied.

The Contractor's attention is directed to **RSA 482-A:3**, the requirements of which must be fulfilled if this excavation site involves excavation or dredging of wetlands and to the provisions of **RSA 483-B** and **RSA 485-A:17**, if this excavation site involves dredging or mining on the border of the surface waters of the State or will significantly alter the characteristic natural runoff or create an unnatural runoff. The Contractor's attention is also directed to Executive Orders 11988 and 11990 if this excavation site will affect floodplains or wetlands. The Contractor's attention is also directed to Section 10 of the Rivers and Harbors Act of 1899 and Sections 401 and 404 of the Clean Water Act, for which compliance may require a permit for work in or affecting "navigable waters of the U.S.," or material placed in "waters of the U.S.," including wetlands. The Contractor is cautioned of the potential to encounter contaminated soils within the excavation area and, if encountered, shall avoid incorporating contaminated soils within

the limits of the project. Furthermore, the Contractor shall complete a Historic and Archaeological Resources certification in accordance with the Contract.

The following Pit Agreement Form shall be completed and submitted for each excavation site that the Contractor intends to open in accordance with RSA 155-E:2,IV:

Rev. 4/05	
<b>STATE OF NEW HAMPSHIRE</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>PIT AGREEMENT</b> (This form does not apply to commercial pits)	
Project_____	Project Number(s)_____
Pit (#) Name_____	City/Town_____
This form sets forth the conditions under which the Department will approve material removal by a Contractor who, under contract as an agent of the Department, seeks to open and operate any pit for the lawful construction, reconstruction, or maintenance of a class I, II, III, IV, or V highway in accordance with <b>RSA 155-E:2, IV</b> .	
<b>By signature herein, the Contractor (agent) and the property owner(s) acknowledge and agree to the following conditions and specifications subject to Departmental approval:</b>	
<b>(1)</b> Prior to the start of excavation, a copy of this agreement executed by the property owner(s), the Contractor, and the Department will be filed with the Regulator (as defined in <b>RSA 155-E:1, III</b> ) within the municipality or unincorporated place in which the pit is located.	
<b>(2)</b> Prior to the start of excavation, the Contractor shall meet the requirements of <b>RSA 155-E:2, IV(b)</b> as follows: <ul style="list-style-type: none"> <li><b>(a)</b> The excavation shall comply with the operational and reclamation standards of <b>RSA 155-E:4-a, RSA 155-E:5, and RSA-E:5-a</b>.</li> <li><b>(b)</b> The excavation shall not be within 50 feet of the boundary of a disapproving abutter or within 10 feet of the boundary of an approving abutter, unless requested by said approving abutter.</li> <li><b>(c)</b> The excavation shall not be unduly hazardous or injurious to the public welfare.</li> <li><b>(d)</b> Existing visual barriers in the areas specified in <b>RSA 155-E:3, III</b> shall not be removed, except to provide access to the excavation.</li> <li><b>(e)</b> The excavation shall not substantially damage a known aquifer, so designated by the United States Geological Survey.</li> <li><b>(f)</b> All required permits for the excavation shall be obtained from state or federal agencies.</li> </ul>	
<b>(3)</b> Exemptions from the provisions of local zoning or other applicable ordinances may be requested by the Contractor through local municipalities. When such request is denied, with respect to the excavation or transportation of materials being used exclusively for the lawful construction, reconstruction, or maintenance of a class I, II or III highway, the Contractor may appeal directly through the Transportation Appeals Board per <b>RSA 155-E:2, IV(c)</b> .	
<b>(4)</b> Property owner(s) with excavation not meeting the permit-exempt requirements of <b>RSA 155-E:2, IV</b> for highway excavations may be required to obtain a permit from the Regulator and meet the requirements of <b>RSA Chapter 155-E</b> , including the Minimum and Express Operational and Reclamation standards contained therein.	

## SECTION 106

(5) Prior to pit excavation and before Project Completion the Contractor shall provide initial and final survey of the pit area by a New Hampshire licensed land surveyor. The total quantity of material removed from the pit shall be reported to the Department and the property owner(s) prior to Project Acceptance unless waived by written consent between involved parties.

(6) Approval by the Department to open and operate the pit will expire at the specified or extended completion date of the project. Access roads to pits adjacent to highways shall be obliterated unless permission is given by the Department to preserve such access roads. If the Contractor has removed screening trees and brush between the highway and the pit, the area shall be replanted to provide a screen in a zone along the edge of the pit as directed by the Department.

Prior to acceptance of the project, the Contractor shall finish the pit area in accordance with the noted RSA's and applicable specifications. By the box(es) checked below, the property owner(s), the Contractor, and the Department's Contract Administrator shall agree on the specific minimum landscaping treatment required in order for the reclamation to be acceptable to the Department:

- ☐ The entire area is to be seeded with slope seed as specified in New Hampshire Department of Transportation Standard Specification 644.
- ☐ The entire area is to be replanted with seedlings in accordance with accepted horticultural practice or as directed.
- ☐ The area is to be partly seeded and the remainder replanted with seedlings depending upon original condition of growth.
- ☐ Working face to be left operational; remainder of area to be ☐ seeded or ☐ replanted with seedlings.

Seedlings shall be \_\_\_\_\_  
(Age or size, species, variety)

planted 8 feet center to center, or \_\_\_\_\_  
(Spacing)

Additional landscaping required and any pertinent information desired to be a part of the official record is ☐ attached, or ☐ noted below:

Landscaping provisions approved by: \_\_\_\_\_  
NHDOT Contract Administrator Date

The Contractor's attention is directed to **RSA 482-A:3**, the requirements of which must be fulfilled if this pit involves excavation or dredging of wetlands and to the provisions of **RSA 483-B** and **RSA 485-A:17**, if this pit involves dredging or mining on the border of the surface waters of the State or will significantly alter the characteristic natural runoff or create an unnatural runoff. The Contractor's attention is also directed to Executive Orders 11988 and 11990 if this pit will affect floodplains or wetlands. The Contractor's attention is also directed to Section 10 of the Rivers and Harbors Act of 1899 and Sections 401 and 404 of the Clean Water Act, for which compliance may require a permit for work in or affecting "navigable waters of the U.S.," or material placed in "waters of the U.S.," including wetlands. The Contractor is cautioned of the potential to encounter contaminated soils within the pit area and, if encountered, shall avoid incorporating contaminated soils within the limits of the project. Furthermore, the Contractor shall complete a Historic and Archaeological Resources certification in accordance with the Contract.

<hr/>		<hr/>	
Signature of Owner	Date	Name(s) of Joint Owner(s)	
<hr/>		<hr/>	
Street		Street	
<hr/>		<hr/>	
Town	State	Town	State
<hr/>		<hr/>	
Contractor		By: (Signature)	Date
If joint owners are involved, the property owner signing should give all other names and addresses. Separate forms should be filed in connection with adjacent owners.			
<b>Note: The signing of this agreement does not constitute permission to commence excavation. Written approval stating the effective date must be received from the Department.</b>			
Distribution:	<input type="checkbox"/> Contract Administrator	<input type="checkbox"/> Construction Bureau	<input type="checkbox"/> Engineering Audit
	<input type="checkbox"/> Property Owner	<input type="checkbox"/> Contractor	<input type="checkbox"/> Municipality/Regulator (via certified mail)

All work indicated in the Pit Agreement Form will be subsidiary to the items of the Contract.  
If joint owners are involved, the Owner signing should give all other names and addresses.  
Separate forms should be filed in connection with adjacent owners.

**Note: The signing of this Agreement does not constitute permission to commence excavation. Written approval stating the effective date must be received from the Engineer.**

**106.03 Samples, Tests, Cited Specifications.** Materials will be inspected, tested and approved by the Engineer or accepted by a Certificate of Compliance from the Contractor as specified in 106.04 unless otherwise specified in the Special Provisions for QC/QA items. The Contractor shall not rely on the results of Department testing being available for Process Quality Control. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, materials tests will be performed by and at the expense of the Department using the standard test methods of the Department, AASHTO, ASTM, or FSS (unless other standard methods are designated) that are in effect on the date of advertisement for Proposals, except that the Engineer reserves the right to make use of any information or method of testing to determine that the material meets the Contract requirements. If there is a difference in the test methods, the order of precedence for the test procedures used will be as follows:

1. The Department's Standard Materials Test Methods
2. AASHTO
3. ASTM
4. FSS

Samples for testing purposes shall be furnished by the Contractor at no cost to the Department. The sampling and sample splitting of materials tested by the Department will be performed or observed by a qualified representative of the Department.

The Department may retest and reject unacceptable materials previously tested and conditionally accepted at the source of supply. Materials to be used are subject to inspection, testing, or rejection prior to Acceptance. Copies of any tests will be furnished to the Contractor's representative upon request.

Random samples of materials or completed work may be taken as checks on the control sampling and testing to determine reasonable compliance with the Specifications. Such sampling will be at any time

## SECTION 106

prior to Acceptance of the Work, either while any phase of the Work is in progress or after it has been completed. The extent and locations of such random sampling will be as designated by the Engineer.

In all AASHTO or ASTM specifications, the sections entitled "Inspection" shall be amended to provide that tests of materials may be made in any Laboratory as defined in 101.

All sieves shall conform to the requirements of the AASHTO M 92, and shall be square hole wire cloth sieves.

When sampling and testing of seeds is required, sampling and testing methods shall be as prescribed in the Rules and Regulations established in accordance with RSA 433.

Equipment required to be supplied by the Contractor for Department use under the specifications shall be calibrated yearly in accordance with the calibration method indicated below. Newly acquired equipment without manufactures certification and equipment that has not been calibrated or verified because it has been removed from service shall be calibrated or verified before being placed in service.

Equipment	Calibration Method
Bench Oven	NHDOT Procedure SC-2
Centrifuge Extractor	AASHTO T 164
Marshall Hammer	AASHTO T 245
Marshall Molds	AASHTO T 245
Mechanical shaker	AASHTO T 27, 7.4
Pressure Air Meter	AASHTO T 152
Proctor Molds	NHDOT Procedure SC-3
Proctor Manual Hammers	NHDOT Procedure SC-4
Scales and Balances	AASHTO M 231
Sieves	ASTM E-11 Methods 1&2
Slump Cone	NHDOT Procedure PC-5
Straight edge	NHDOT Procedure SC-6
Standard 0.003 m <sup>3</sup> (1/10 ft <sup>3</sup> ) Container (Unit Weight Buckets)	NHDOT Procedure PC-2
Vacuum Pump	AASHTO T 209

Any equipment listed above required by section 401, 520 and 698 shall be calibrated by the Contractor in accordance with the calibration method specified.

The Contractor shall prepare and maintain record forms and a file for each piece of equipment in each laboratory requiring calibration or verification. The file and form for each piece of equipment shall contain detailed information identifying the equipment, records of calibration or verification work performed in chronological order and the next date calibration or verification work is required (Month and Year) and shall be kept in the same laboratory as the equipment.

When any test equipment is overloaded, mishandled, giving results that are suspect, or is not meeting specification tolerances, the Engineer shall notify the Contractor and the equipment shall be taken out of service. The equipment shall be returned to service only after appropriate repairs are made and calibration and verification shows the equipment to function satisfactorily or to meet specification tolerances.

**106.03.1 Quality Control/ Quality Assurance (QC/QA).** The Contractor may observe the Department's sampling and testing. If the Contractor believes that a sampling and/or test procedure deviates from the specified procedure, the Contractor shall describe the deviation to the Engineer's designated representative immediately and document the deviation in writing within twenty-four (24) hours. Immediately upon request and explanation of the deviation by the Contractor, the original sampling and/or testing will be completed and recorded, then a second sample of the material will be taken and tested using what the Contractor believes to be the correct procedure. The specified sample and/or test method will be reviewed at a later time to determine which procedure is correct. The test result obtained using the procedure determined to be correct will be used for the subplot. If the original

sampling and/or testing procedure is found to have been done correctly, the Contractor shall bear the cost of the second sampling, testing, and evaluation, as shown in the table below. Such costs shall be deducted from monies owed the Contractor.

<i>TEST</i>	<b>COST</b>
Concrete Air Test	\$200/test
Concrete Strength Test	\$200/test
Concrete W/C Ratio Test	\$200/test
Concrete Permeability Test	\$500/test
Concrete Cover Test	\$500/test
Asphalt Gradation And/Or Voids Tests	\$200/test
Asphalt Voids And/Or Thickness Tests	\$300/test
Asphalt Cross-Slope Measurement	\$200/test
Asphalt Ride Quality Test	\$1100/test

Items designated for acceptance under Quality Assurance (QA) provisions will be randomly sampled and tested in accordance with the recommended acceptance guidelines specified for that item. Acceptance tests will govern in all cases for determination of pay factors without regard to quality control tests.

**106.03.1.1** The Contractor shall provide Process Quality Control adequate to produce work of acceptable quality. The Contractor shall perform process quality control sampling, testing, and inspection during all phases of the work at a rate sufficient to assure that the work conforms to the Contract requirements and the minimum guidelines specified for that item.

The Engineer will not sample or test for Process Control or assist in controlling the Contractor's production operations. The Contractor shall provide personnel and testing equipment capable of providing a product which conforms to specified requirements. Continued production of non-conforming work at a reduced price, in lieu of adjustments to bring work into conformance, will not be allowed.

**106.03.1.2** The Contractor shall provide and maintain a Process Quality Control Plan, hereinafter referred to as the "Plan", including all the personnel, equipment, supplies, and facilities necessary to obtain samples, perform tests, and otherwise control the quality of the product to meet specified requirements.

The Contractor shall be prepared to present and discuss, at the pre-construction conference, quality control responsibilities for the specific items indicated in the Contract. The Contractor shall submit five copies of the Quality Control Plan to the Construction Bureau office in Concord and directed to the appropriate District Construction Engineer a minimum of 20 working days prior to the pre-placement meeting. A copy of the cover letter or transmittal letter shall be forwarded to the Contract Administrator to notify project personnel of the plan submittal.

The Contractor shall not start work on the subject items without an approved Plan. Partial payment will not be made for materials subject to specific quality control requirements without an approved Plan. The approval process for the Contractor's Plan may include inspection of testing equipment and a sampling and testing demonstration by the Contractor's technician(s) to assure an acceptable level of performance.



## SECTION 106

**106.03.1.3** The Contractor shall schedule a pre-placement meeting a minimum of five working days prior to the start of related work. The meeting shall include the Plan Administrator, Contract Administrator, District Construction Engineer, Contractor, Supplier, and QC/QA Coordinator. Additional meetings may be required if changes to the plan or procedures are made, or when required to solve problems that arise.

**106.03.1.4** All Contractor process quality control testing under the Plan shall be performed by qualified technicians in laboratories approved by the Bureau of Materials and Research. Technician qualifications shall be as described in the specifications for the item being accepted under Quality Assurance provisions.

Laboratory facilities shall be kept clean and all equipment shall be maintained in proper working condition. The Engineer shall be permitted unrestricted access to inspect and review the Contractor's laboratory facility. The Engineer will advise the Contractor in writing of any noted deficiencies concerning the laboratory facility, equipment, supplies, or testing personnel and procedures. Deficiencies shall be grounds for the Engineer to order an immediate stop to incorporating materials into the work until deficiencies are corrected.

**106.03.1.5** The Plan shall be administered by a qualified individual. Administrator qualifications shall be described in the specifications for the item being accepted under Quality Assurance provisions. The Plan Administrator or his/her approved designee shall be available whenever work under QC/QA specification is being performed.

The individual administering the Plan must be a full-time employee of or a consultant engaged by the Contractor. The individual shall have full authority to institute any and all actions necessary for the successful operation of the Plan.

**106.03.1.6** The Plan shall contain a system for sampling that assures all material being produced has an equal chance of being selected for testing. The Engineer shall be provided the opportunity to witness all sampling.

When directed by the Engineer, the Contractor shall sample and test any material which appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or corrected by the Contractor. All sampling shall be in accordance with Department, AASHTO, or ASTM procedures.

**106.03.1.7** All testing shall be performed in accordance with the acceptance test procedures applicable to the specified contract items or other methods set forth in the approved Plan. Should acceptance test procedures not be applicable to quality control tests, the Plan shall stipulate the test procedures to be utilized. Upon request the Contractor shall provide copies of all test results on forms meeting the approval of the Engineer.

**106.03.1.8** The Contractor shall maintain complete record of all process quality control tests and inspections. The records shall be available to the Engineer for review and copies furnished upon request.

Control Charts acceptable to the Engineer shall be maintained and kept current at a location satisfactory to the Engineer. As a minimum, the Control Charts shall identify the project number, the contract item number, the test number, each test parameter, the upper and lower specification limit applicable to each test parameter and the Contractor's test results. The Contractor shall use the Control Charts as part of a process control system for identifying production and equipment problems and for identifying pay factor reductions before they occur.



**106.03.2** Items specified to be sampled and tested on a Quality Assurance (QA) basis will be evaluated for acceptance in accordance with the guidelines specified for that item. All acceptance test results for a lot as defined in the specification will be analyzed collectively and statistically by the Quality Level Analysis-Standard Deviation Method using the procedures listed to determine the total estimated percent of the lot that is within specification limits. Test results on material not incorporated in the work will not be included in the quality level analysis.

**106.03.2.1** A lot containing non-specification material (less than 1.00 pay factor) will be accepted provided the pay factor is at least 0.75 and there are no isolated defects identified by the Engineer.

**106.03.2.2** A lot containing non-specification material that fails to obtain at least a 0.75 pay factor will be subject to the following:

The Contractor shall submit a procedure for correction of the non specification material for approval by The Engineer. After any approved correction of any sublots, new samples from these sublots will be taken to be used in calculating pay factors for the lot and the old test results will be discarded. Alternatively, the Contractor may submit a written request for acceptance of the material at a negotiated price. Such request for acceptance shall include an engineering analysis showing expected effects on performance and service life. The Engineer will determine whether the material may remain in place at the negotiated price.

**106.03.2.3** The Engineer may reject material that appears to be defective based on visual inspection. Such rejected material shall not be used in the work.

No payment will be made for the materials rejected by the Engineer unless the Contractor requests the material tested. If so requested prior to disposal, three representative samples will be obtained and tested. The tests results will be statistically evaluated. If found to have a pay factor of less than 0.75 or otherwise specified, no payment will be made and the Contractor will bear the cost of the sampling, testing, and evaluation. If the pay factor is 0.75 or as otherwise specified or greater, payment will be made for the materials at the invoice cost plus 10%.

**106.03.2.4** Quality Level Analysis - Standard Deviation Method procedures are as follows:

1. Determine the arithmetic mean (X) of the test results:

$$X = \frac{\sum x}{n}$$

Where:  $\Sigma$  = summation of

$x$  = individual test value of  $x$

$n$  = total number of test values

2. Compute the sample standard deviation(s):

$$s = \sqrt{\frac{n\Sigma(x^2) - (\Sigma x)^2}{n(n-1)}}$$

Where:  $\Sigma(x^2)$  = summation of the square of individual test values.

$(\Sigma x)^2$  = summation of the individual test values squared.

3. Compute the upper quality index ( $Q_U$ ):

$$Q_U = \frac{USL - X}{s}$$

## SECTION 106

Where: USL = upper specification limit.

4. Compute the lower quality index ( $Q_L$ ):

$$Q_L = \frac{X - LSL}{s}$$

Where: LSL = lower specification limit.

5. Determine  $P_U$  (percent within the upper specification limit which corresponds to a given  $Q_U$ ) from Table 106-1.  
Note: If a USL is not specified,  $P_U$  will be 100.

6. Determine  $P_L$  (percent within the lower specification limit which corresponds to a given  $Q_L$ ) from Table 106-1.  
Note: If a LSL is not specified,  $P_L$  will be 100.

7. Determine the Quality Level (total percent within specification limits).

$$\text{Quality Level} = (P_U + P_L) - 100$$

8. Determine the Pay Factor (PF) for the lot from Table 106-2 using the Quality Level from step 7.

9. Determine the Composite Pay Factor (CPF) for each lot.

$$\text{CPF} = \frac{[f_1(PF_1) + f_2(PF_2) + \dots + f_j(PF_j)]}{\Sigma f}$$

Where:  $f_j$  = price adjustment factor listed in the specifications for the applicable property.

$PF_j$  = Pay Factor for the applicable property.

$\Sigma f$  = Sum of the "f" (price adjustment) factors.

Note: Numbers used in the above calculations shall be carried to significant figures and rounded according to AASHTO Standard Recommended Practice R-11 (Rounding off method).

**106.03.2.5** If a measured characteristic is not included in the Contract or is not evaluated due to Department owned test equipment that is inoperable, its pay factor shall be 1.00 when calculating the CPF.

**106.03.3 Random Sampling Locations.** The selection of the sampling locations for quality assurance tests must be entirely random. This procedure shall be used for determining the location for taking a sample in order to eliminate any intentional or minimize any unintentional bias on the part of the person taking the sample.

Sampling locations shall be determined on the basis of time, tonnage, volume, distance, area, etc. The only other necessary information is the size of the subplot to be sampled. Random numbers shall be selected using the procedures outlined below. Once the random numbers have been selected they shall be applied to the subplot sizes to determine sampling location.

**106.03.3.1 Sampling In-Place Roadway Material:** Determine tonnage of the subplot. Following method #1 or method #2 pick two random numbers for each subplot. Multiply the random numbers by the width and tonnage to arrive at the sampling location.

Example: A subplot is 750 tons (700 metric tons). The lane being paved 12 ft. is (3.0 m) wide. Using method #1 or method #2, choose a random number, which is then multiplied by 750 (700). In this instance, the number chosen was 0.376. Thus the sample will be taken at 282 tons (263.2 metric tons) from the beginning of the subplot. Determine the location from the edge of the pavement by using the second random number, which is then multiplied by 12 ft (3.0 m). In this instance, the number chosen was 0.512. Therefore, the sample should be taken 282 tons (263.2 metric tons) from the beginning of the subplot and 6 ft. (1.54 m) from the designated (right or left) edge of the pavement.

**106.03.3.2 Sampling Concrete Truck Loads:** Determine the quantity that represents a subplot of material. To determine which trucks to sample, choose a random number and multiply this number by the total quantity in the subplot. This will give an indication on when to take the sample.

Example: A subplot of concrete is 50 cy (38 m<sup>3</sup>). Using method #1 or method #2, choose a random number, which is then multiplied by 50 cy (38 m<sup>3</sup>). In this instance, the number chosen is 0.763. The result comes out at 38 cy (30 m<sup>3</sup>), which falls in the 5th load (assuming 8 cy (6 m<sup>3</sup>) per load). Sample the concrete within the middle third of the 5th load.

### **106.03.3.3 Instructions for choosing random numbers.**

**106.3.3.3.1 Method #1.** Table 106-3 consists of all numbers from 0.001 to 1.000. Each number appears only once. To use the table correctly and to eliminate bias, point without looking to a number in the table. It may be advantageous to use a pointer such as a mechanical pencil or a like pointed object. Either page may be used but should be alternated between successive uses.

After picking a number, the basis is established for locating the sought-after number in a more random, unbiased method. Examine the first two digits of the three-digit number chosen. This number locates the line number (the vertical column on the left) to be used in finding the sought-after number. Note: the number 1.000 is invalid for choosing the line number.

Once the line number is chosen, repeat the procedure by choosing another number and, using the first digit, pick the column number (the horizontal numbers at the top of the table). The intersection of the two numbers is the sought-after number.

**106.03.3.3.2 Method #2.** Random numbers may be obtained by using the random number generator function found on hand-held calculators or computer spreadsheet programs.

# SECTION 106

**Table 106-1 Quality Level Analysis by the Standard Deviation Method**

P <sub>U</sub> or P <sub>L</sub> %*	- Upper Quality Index Q <sub>U</sub> or Lower Quality Index Q <sub>L</sub>														
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=	n=12 to n=	n=15 to n=	n=19 to n=	n=26 to n=	n=38 to n=	n=70 to n=	n=201 to n=x
								11	14	18	25	37	69	200	
100	1.16	1.50	1.79	2.03	2.23	2.39	2.53	2.65	2.83	3.03	3.20	3.38	3.54	3.70	3.83
99		1.47	1.67	1.80	1.89	1.95	2.00	2.04	2.09	2.14	2.18	2.22	2.26	2.29	2.31
98	1.15	1.44	1.60	1.70	1.76	1.81	1.84	1.86	1.91	1.93	1.96	1.99	2.01	2.03	2.05
97		1.41	1.54	1.62	1.67	1.70	1.72	1.74	1.77	1.79	1.81	1.83	1.85	1.86	1.87
96	1.14	1.38	1.49	1.55	1.59	1.61	1.63	1.65	1.67	1.68	1.70	1.71	1.73	1.74	1.75
95		1.35	1.44	1.49	1.52	1.54	1.55	1.56	1.58	1.59	1.61	1.62	1.63	1.63	1.64
94	1.13	1.32	1.39	1.43	1.46	1.47	1.48	1.49	1.50	1.51	1.52	1.53	1.54	1.55	1.55
93		1.29	1.35	1.38	1.40	1.41	1.42	1.43	1.44	1.44	1.45	1.46	1.46	1.47	1.47
92	1.12	1.26	1.31	1.33	1.35	1.36	1.36	1.37	1.37	1.38	1.39	1.39	1.40	1.40	1.40
91	1.11	1.23	1.27	1.29	1.30	1.30	1.31	1.31	1.32	1.32	1.33	1.33	1.33	1.34	1.34
90	1.10	1.20	1.23	1.24	1.25	1.25	1.26	1.26	1.26	1.27	1.27	1.27	1.28	1.28	1.28
89	1.09	1.17	1.19	1.20	1.20	1.21	1.21	1.21	1.21	1.22	1.22	1.22	1.22	1.22	1.23
88	1.07	1.14	1.15	1.16	1.16	1.16	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
87	1.06	1.11	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.13	1.13
86	1.04	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
85	1.03	1.05	1.05	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
84	1.01	1.02	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
83	1.00	0.99	0.98	0.97	0.97	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.95	0.95	0.95
82	0.97	0.96	0.95	0.94	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
81	0.96	0.93	0.91	0.90	0.90	0.89	0.89	0.89	0.89	0.88	0.88	0.88	0.88	0.88	0.88
80	0.93	0.90	0.88	0.87	0.86	0.86	0.86	0.85	0.85	0.85	0.85	0.84	0.84	0.84	0.84
79	0.91	0.87	0.85	0.84	0.83	0.82	0.82	0.82	0.82	0.81	0.81	0.81	0.81	0.81	0.81
78	0.89	0.84	0.82	0.80	0.80	0.79	0.79	0.79	0.78	0.78	0.78	0.78	0.77	0.77	0.77
77	0.87	0.81	0.78	0.77	0.76	0.76	0.76	0.75	0.75	0.75	0.75	0.74	0.74	0.74	0.74
76	0.84	0.78	0.75	0.74	0.73	0.73	0.72	0.72	0.72	0.71	0.71	0.71	0.71	0.71	0.71
75	0.82	0.75	0.72	0.71	0.70	0.70	0.69	0.69	0.69	0.68	0.68	0.68	0.68	0.68	0.67
74	0.79	0.72	0.69	0.68	0.67	0.66	0.66	0.66	0.66	0.65	0.65	0.65	0.65	0.64	0.64
73	0.76	0.69	0.66	0.65	0.64	0.63	0.63	0.63	0.62	0.62	0.62	0.62	0.62	0.61	0.61
72	0.74	0.66	0.63	0.62	0.61	0.60	0.60	0.60	0.59	0.59	0.59	0.59	0.59	0.58	0.58
71	0.71	0.63	0.60	0.59	0.58	0.57	0.57	0.57	0.57	0.56	0.56	0.56	0.56	0.55	0.55
70	0.68	0.60	0.57	0.56	0.55	0.55	0.54	0.54	0.54	0.53	0.53	0.53	0.53	0.53	0.52
69	0.65	0.57	0.54	0.53	0.52	0.52	0.51	0.51	0.51	0.50	0.50	0.50	0.50	0.50	0.50
68	0.62	0.54	0.51	0.50	0.49	0.49	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47
67	0.59	0.51	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44
66	0.56	0.48	0.45	0.44	0.44	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.41	0.41	0.41
65	0.52	0.45	0.43	0.41	0.41	0.40	0.40	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.39
64	0.49	0.42	0.40	0.39	0.38	0.38	0.37	0.37	0.37	0.37	0.36	0.36	0.36	0.36	0.36
63	0.46	0.39	0.37	0.36	0.35	0.35	0.35	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33
62	0.43	0.36	0.34	0.33	0.32	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31
61	0.39	0.33	0.31	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.28
60	0.36	0.30	0.28	0.27	0.27	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.25	0.25
59	0.32	0.27	0.25	0.25	0.24	0.24	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.23
58	0.29	0.24	0.23	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.20
57	0.25	0.21	0.20	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
56	0.22	0.18	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15
55	0.18	0.15	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
54	0.14	0.12	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53	0.11	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
52	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
51	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Note:** For negative values of Q<sub>U</sub> or Q<sub>L</sub>, P<sub>U</sub> or P<sub>L</sub> is equal to 100 minus the table value for P<sub>U</sub> or P<sub>L</sub>. If the value of Q<sub>U</sub> or Q<sub>L</sub> does not correspond exactly to a figure in the table, use the next higher figure.

\*Within limits for positive values of Q<sub>U</sub> or Q<sub>L</sub>.

**Table 106-2. PAY FACTORS**

Pay Fac tor	Required Quality Level for a Given Sample Size(n) and Given Pay Factor														
								n= 10 to n= 11	n= 12 to n= 14	n= 15 to n= 18	n= 19 to n= 25	n= 26 to n= 37	n= 38 to n= 69	n= 70 to n= 200	n= 201 to x
	n= 3	n= 4	n= 5	n= 6	n= 7	n= 8	n= 9	n= 11	n= 14	n= 18	n= 25	n= 37	n= 69	n= 200	n= x
1.05	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1.04	90	91	92	93	93	93	94	94	95	95	96	96	96	97	99
1.03	80	85	87	88	89	90	91	91	92	93	93	94	95	96	97
1.02	75	80	83	85	86	87	88	88	89	90	91	92	93	94	95
1.01	71	77	80	82	84	85	85	86	87	88	89	90	91	93	94
1.00	68	74	78	80	81	82	83	84	85	86	87	89	90	91	93
0.99	66	72	75	77	79	80	81	82	83	85	86	87	88	90	92
0.98	64	70	73	75	77	78	79	80	81	83	84	85	87	88	90
0.97	62	68	71	74	75	77	78	78	80	81	83	84	85	87	89
0.96	60	66	69	72	73	75	76	77	78	80	81	83	84	86	88
0.95	59	64	68	70	72	73	74	75	77	78	80	81	83	85	87
0.94	57	63	66	68	70	72	73	74	75	77	78	80	81	83	86
0.93	56	61	65	67	69	70	71	72	74	75	77	78	80	82	84
0.92	55	60	63	65	67	69	70	71	72	74	75	77	79	81	83
0.91	53	58	62	64	66	67	68	69	71	73	74	76	78	80	82
0.90	52	57	60	63	64	66	67	68	70	71	73	75	76	79	81
0.89	51	55	59	61	63	64	66	67	68	70	72	73	75	77	80
0.88	50	54	57	60	62	63	64	65	67	69	70	72	74	76	79
0.87	48	53	56	58	60	62	63	64	66	67	69	71	73	75	78
0.86	47	51	55	57	59	60	62	63	64	66	68	70	72	74	77
0.85	46	50	53	56	58	59	60	61	63	65	67	69	71	73	76
0.84	45	49	52	55	56	58	59	60	62	64	65	67	69	72	75
0.83	44	48	51	53	55	57	58	59	61	63	64	66	68	71	74
0.82	42	46	50	52	54	55	57	58	60	61	63	65	67	70	72
0.81	41	45	48	51	53	54	56	57	58	60	62	64	66	69	71
0.80	40	44	47	50	52	53	54	55	57	59	61	63	65	67	70
0.79	38	43	46	48	50	52	53	54	56	58	60	62	64	66	69
0.78	37	41	45	47	49	51	52	53	55	57	59	61	63	65	68
0.77	36	40	43	46	48	50	51	52	54	56	57	60	62	64	67
0.76	34	39	42	45	47	48	50	51	53	55	56	58	61	63	66
0.75	33	38	41	44	46	47	49	50	51	53	55	57	59	62	65
<b>NOTE:</b> To obtain a given pay factor, the computed Quality Level shall equal or exceed the value in the table. Delete Pay Factor rows more than 1.0 where quality incentives are not allowed.															

## SECTION 106

**Table 106-3 (a) TABLE OF RANDOM NUMBERS**

	0	1	2	3	4	5	6	7	8	9
0	0.272	0.519	0.098	0.459	1.000	0.554	0.250	0.246	0.736	0.432
1	0.994	0.978	0.693	0.593	0.690	0.028	0.831	0.319	0.073	0.268
2	0.039	0.449	0.737	0.501	0.960	0.254	0.239	0.474	0.031	0.720
3	0.144	0.695	0.339	0.621	0.128	0.032	0.413	0.617	0.764	0.257
4	0.312	0.138	0.670	0.894	0.682	0.061	0.832	0.765	0.226	0.745
5	0.871	0.838	0.595	0.576	0.096	0.581	0.245	0.786	0.412	0.867
6	0.783	0.874	0.795	0.430	0.265	0.059	0.260	0.563	0.632	0.394
7	0.358	0.424	0.684	0.074	0.109	0.345	0.618	0.176	0.352	0.748
8	0.494	0.839	0.337	0.325	0.699	0.083	0.043	0.809	0.981	0.499
9	0.642	0.514	0.297	0.869	0.744	0.824	0.524	0.656	0.608	0.408
10	0.485	0.240	0.292	0.335	0.088	0.589	0.127	0.396	0.401	0.407
11	0.728	0.819	0.557	0.050	0.152	0.816	0.404	0.079	0.703	0.493
12	0.029	0.262	0.558	0.159	0.767	0.175	0.979	0.521	0.781	0.843
13	0.918	0.348	0.311	0.232	0.797	0.921	0.995	0.225	0.397	0.356
14	0.641	0.013	0.780	0.478	0.529	0.520	0.093	0.426	0.323	0.504
15	0.208	0.468	0.045	0.798	0.065	0.315	0.318	0.742	0.597	0.080
16	0.346	0.429	0.537	0.469	0.697	0.124	0.541	0.525	0.281	0.962
17	0.900	0.206	0.539	0.308	0.480	0.293	0.448	0.010	0.836	0.233
18	0.228	0.369	0.513	0.762	0.952	0.856	0.574	0.158	0.689	0.579
19	0.746	0.170	0.974	0.306	0.145	0.139	0.417	0.195	0.338	0.901
20	0.363	0.103	0.931	0.389	0.199	0.488	0.915	0.067	0.878	0.640
21	0.663	0.942	0.278	0.785	0.638	0.002	0.989	0.462	0.927	0.186
22	0.545	0.185	0.054	0.198	0.717	0.247	0.913	0.975	0.555	0.559
23	0.360	0.349	0.569	0.910	0.420	0.492	0.947	0.115	0.884	0.452
24	0.789	0.815	0.464	0.484	0.020	0.007	0.547	0.941	0.365	0.261
25	0.279	0.609	0.086	0.852	0.890	0.108	0.076	0.089	0.662	0.607
26	0.680	0.235	0.706	0.827	0.572	0.769	0.310	0.036	0.329	0.477
27	0.078	0.444	0.178	0.651	0.423	0.672	0.517	0.660	0.657	0.972
28	0.676	0.830	0.531	0.888	0.305	0.421	0.307	0.502	0.112	0.808
29	0.861	0.899	0.643	0.771	0.037	0.241	0.582	0.578	0.634	0.077
30	0.111	0.364	0.970	0.669	0.548	0.687	0.639	0.510	0.105	0.549
31	0.289	0.857	0.948	0.980	0.132	0.094	0.298	0.870	0.309	0.441
32	0.961	0.893	0.392	0.377	0.864	0.472	0.009	0.946	0.766	0.287
33	0.637	0.986	0.753	0.566	0.213	0.807	0.017	0.460	0.515	0.630
34	0.834	0.121	0.255	0.453	0.376	0.583	0.422	0.371	0.399	0.366
35	0.284	0.490	0.402	0.151	0.044	0.436	0.747	0.694	0.136	0.585
36	0.038	0.814	0.594	0.911	0.324	0.322	0.895	0.411	0.160	0.367
37	0.351	0.283	0.027	0.220	0.685	0.527	0.943	0.556	0.853	0.612
38	0.143	0.384	0.645	0.479	0.489	0.052	0.187	0.990	0.912	0.750
39	0.512	0.056	0.018	0.122	0.303	0.803	0.553	0.729	0.205	0.925
40	0.296	0.705	0.156	0.616	0.534	0.168	0.564	0.866	0.739	0.850
41	0.451	0.536	0.768	0.518	0.481	0.880	0.835	0.734	0.427	0.847
42	0.837	0.405	0.591	0.370	0.104	0.848	0.004	0.414	0.354	0.707
43	0.724	0.153	0.841	0.829	0.470	0.391	0.388	0.163	0.817	0.790
44	0.665	0.825	0.671	0.623	0.770	0.400	0.068	0.440	0.019	0.944
45	0.573	0.716	0.266	0.456	0.434	0.467	0.603	0.169	0.721	0.779
46	0.332	0.702	0.300	0.570	0.945	0.968	0.649	0.097	0.118	0.242
47	0.755	0.951	0.937	0.550	0.879	0.162	0.791	0.810	0.625	0.674
48	0.439	0.491	0.855	0.446	0.773	0.542	0.416	0.350	0.957	0.419
49	0.700	0.877	0.442	0.286	0.526	0.071	0.154	0.988	0.333	0.626

Table 106-3 (b) TABLE OF RANDOM NUMBERS

	0	1	2	3	4	5	6	7	8	9
50	0.523	0.613	0.752	0.733	0.528	0.072	0.820	0.929	0.777	0.461
51	0.905	0.182	0.567	0.249	0.227	0.229	0.604	0.304	0.217	0.142
52	0.373	0.120	0.602	0.793	0.692	0.863	0.954	0.873	0.107	0.675
53	0.057	0.953	0.041	0.090	0.223	0.508	0.806	0.438	0.203	0.586
54	0.967	0.040	0.708	0.271	0.189	0.342	0.740	0.801	0.985	0.263
55	0.917	0.715	0.758	0.005	0.666	0.599	0.934	0.100	0.987	0.085
56	0.131	0.646	0.659	0.047	0.051	0.562	0.435	0.731	0.362	0.317
57	0.326	0.605	0.443	0.601	0.386	0.560	0.378	0.172	0.445	0.636
58	0.299	0.106	0.237	0.732	0.796	0.476	0.099	0.804	0.735	0.950
59	0.101	0.055	0.776	0.686	0.171	0.533	0.936	0.095	0.982	0.211
60	0.267	0.598	0.754	0.658	0.274	0.215	0.177	0.218	0.330	0.628
61	0.471	0.102	0.454	0.568	0.963	0.357	0.882	0.507	0.157	0.580
62	0.535	0.881	0.014	0.966	0.958	0.190	0.180	0.759	0.433	0.355
63	0.277	0.458	0.295	0.196	0.772	0.148	0.466	0.291	0.688	0.046
64	0.719	0.167	0.181	0.653	0.328	0.070	0.015	0.155	0.631	0.063
65	0.385	0.858	0.713	0.883	0.916	0.084	0.561	0.999	0.379	0.668
66	0.862	0.928	0.822	0.812	0.977	0.395	0.788	0.920	0.673	0.698
67	0.486	0.938	0.757	0.749	0.991	0.219	0.264	0.932	0.898	0.006
68	0.091	0.872	0.959	0.922	0.727	0.811	0.075	0.374	0.133	0.730
69	0.146	0.482	0.930	0.611	0.179	0.011	0.248	0.886	0.344	0.926
70	0.709	0.184	0.390	0.409	0.191	0.117	0.860	0.135	0.406	0.134
71	0.996	0.896	0.760	0.347	0.053	0.372	0.193	0.756	0.565	0.914
72	0.971	0.859	0.147	0.114	0.418	0.889	0.792	0.064	0.652	0.288
73	0.202	0.538	0.026	0.949	0.696	0.008	0.846	0.259	0.415	0.425
74	0.212	0.321	0.778	0.940	0.496	0.231	0.664	0.903	0.473	0.909
75	0.207	0.799	0.487	0.022	0.813	0.891	0.500	0.368	0.725	0.437
76	0.818	0.503	0.906	0.224	0.904	0.892	0.455	0.343	0.924	0.197
77	0.701	0.984	0.174	0.141	0.704	0.908	0.048	0.828	0.997	0.058
78	0.035	0.380	0.001	0.381	0.251	0.497	0.214	0.794	0.552	0.588
79	0.221	0.200	0.587	0.353	0.584	0.270	0.885	0.110	0.956	0.711
80	0.647	0.403	0.530	0.738	0.280	0.457	0.650	0.276	0.661	0.973
81	0.667	0.722	0.327	0.723	0.410	0.635	0.012	0.907	0.316	0.677
82	0.644	0.590	0.021	0.269	0.042	0.062	0.387	0.183	0.964	0.544
83	0.302	0.123	0.116	0.282	0.851	0.256	0.648	0.845	0.782	0.993
84	0.633	0.933	0.331	0.546	0.842	0.016	0.236	0.164	0.923	0.976
85	0.060	0.681	0.683	0.775	0.624	0.955	0.126	0.655	0.919	0.113
86	0.165	0.532	0.431	0.341	0.092	0.244	0.222	0.336	0.034	0.216
87	0.875	0.691	0.383	0.382	0.596	0.301	0.275	0.188	0.868	0.805
88	0.726	0.902	0.252	0.130	0.238	0.398	0.763	0.463	0.615	0.140
89	0.273	0.393	0.285	0.161	0.619	0.865	0.551	0.030	0.571	0.258
90	0.253	0.821	0.600	0.023	0.606	0.849	0.610	0.577	0.082	0.774
91	0.340	0.654	0.173	0.495	0.498	0.992	0.192	0.506	0.751	0.129
92	0.194	0.290	0.592	0.983	0.509	0.998	0.522	0.627	0.741	0.540
93	0.166	0.450	0.210	0.204	0.840	0.826	0.833	0.516	0.965	0.375
94	0.712	0.314	0.033	0.823	0.629	0.939	0.887	0.066	0.743	0.081
95	0.622	0.800	0.710	0.575	0.678	0.465	0.802	0.969	0.150	0.784
96	0.313	0.294	0.897	0.718	0.614	0.876	0.025	0.049	0.620	0.125
97	0.137	0.087	0.003	0.483	0.201	0.209	0.320	0.935	0.447	0.787
98	0.243	0.679	0.844	0.069	0.024	0.543	0.714	0.234	0.505	0.428
99	0.361	0.359	0.230	0.761	0.334	0.149	0.511	0.475	0.854	0.119

## SECTION 106

**106.04 Certification of Compliance.** The Contractor shall provide a Certificate of Compliance for all materials that are to be permanently incorporated into the Work for which there is no prescribed schedule of acceptance testing by the Engineer. If more than one product is used for the same purpose, a Certificate of Compliance shall be submitted for each product. Certificates of Compliance shall be submitted on the form shown below. Certificates will also be required for temporary safety related items, such as guardrail, impact attenuators, traffic control devices and pavement markings. No payment will be made for any item until the required certificates have been received. The certificate shall show the following:

- (a) Date of certification.
- (b) Description of material supplied.
- (c) Product Trade Name (as listed on the Qualified Products List if applicable)
- (d) Name of manufacturer and/or supplier.
- (e) Name of the Contractor to whom the material is supplied.
- (f) Project name and number to which the material is consigned.
- (g) Contract item number and Contract item name.
- (h) A statement that the material or assemblies provided fully meets the requirements of the pertinent Contract Specification.
- (i) That records will be maintained for a three year period as defined below.
- (j) Signature of a person having legal authority to bind the originator of the certificate.
- (k) If the product category is listed on the Department's Qualified Products List, the location where the product was used shall be provided.

Certificates of Compliance may be submitted, on the form shown in this section, by the manufacturer, the supplier, or the Contractor. In all cases, the Contractor shall fill out the project related location information at the bottom of the form for products listed on the Qualified Products List. The originator of the certificate must maintain all documentation for said certificates for a period of not less than three years from the date the project has been completed and accepted.

. Certificates of Compliance covering more than one type of material or item will be acceptable if a listing is made of the item number, name of item, manufacturer, or supplier or both for each material covered.

Materials or assemblies used on the basis of Certificates of Compliance may be sampled and tested by the Department and if determined not to meet Contract requirements will be rejected or accepted under 105.03. All work done to replace or repair defective material shall be at the Contractor's expense. This provision shall remain in force for a period of three years from the date of Acceptance.



**STATE OF NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION  
CERTIFICATE OF COMPLIANCE**

Date \_\_\_\_\_, 20\_\_\_\_

WE, \_\_\_\_\_

(Manufacturer, Supplier, or Contractor)

Address: \_\_\_\_\_

HEREBY CERTIFY THAT \_\_\_\_\_

(Type of Product)

\_\_\_\_\_  
(Product Trade Name)

Manufactured by \_\_\_\_\_

Supplied by: \_\_\_\_\_

Furnished to \_\_\_\_\_

Contractor (Prime or Sub.)

Delivered and Used on:

\_\_\_\_\_  
Project Name                      Federal No.                      State No.

Used for Item No. \_\_\_\_\_

\_\_\_\_\_  
Name of Item

MEETS THE REQUIREMENTS OF THE PERTINENT PROJECT PLANS, SPECIAL PROVISIONS AND SPECIFICATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) IN ALL RESPECTS. PROCESSING, PRODUCT TESTING, AND INSPECTION CONTROL OF RAW MATERIALS ARE IN CONFORMANCE WITH ALL APPLICABLE SPECIFICATIONS, DRAWINGS AND STANDARDS OF ALL ARTICLES FURNISHED.

All records and documents pertinent to this certificate and not submitted herewith will be maintained available by the undersigned for a period of not less than three years from the date the Project has been completed and accepted.

Signed by \_\_\_\_\_ Title \_\_\_\_\_

(Officer of Organization)

Subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public/Justice of the Peace

**TO BE COMPLETED BY CONTRACTOR.** Location information for products listed on the QPL

Bridge Items

Roadway Items

Bridge No.: \_\_\_\_\_

Station: \_\_\_\_\_

## SECTION 106

The following is a list of materials that require Certificates of Compliance. This list is not all-inclusive, as certain special materials not commonly used on all projects will also require certificates.

- Asphalt Materials
- Bearing Pads
- Bearing Assemblies
- Bearing Piles and Permanent Sheeting made of Steel, Timber, Treated Timber, and Concrete
- Bridge Elastomeric Expansion Devices
- Bridge Railing and Hardware
- Castings of Grates, Frames and Covers
- Concrete Curing, Waterproofing, Sealing Agents, and Admixtures
- Concrete Blocks, Precast Sections, Light Pole Bases, and Bounds
- Culverts, Underdrains, Structural Plate Pipe, Structural Plate Arches
- Delineators
- Fence Materials consisting of Posts, Fabric and Hardware
- Geotextiles
- Guardrail consisting of Beam Rail, Cable, Posts, and Fittings
- Joint Materials such as Cork
- Luminaries and Supports
- Matting for Erosion Control
- Membrane Waterproofing
- Paint
- Pavement Markings consisting of Tapes, Thermoplastic, Markers, and Paints
- Pipe and Accessories for Water, Sewer, and Drainage
- Shear Connectors
- Sign Materials consisting of Posts, Trusses, Fasteners, Sheeting, and Panels
- Steel Reinforcing Bars, and Wire Mesh, Minor Structural and Structural Steel
- Traffic Control Devices
- Traffic Signals and Equipment
- Utility Conduits and Pull Boxes
- Waterstops made of Rubber, Polyvinyl Chloride, and Copper
- Witness Markers

Supplementing the above certificates, upon request, the Engineer shall be furnished with a copy of the manufacturer's certificate of materials showing the physical properties, chemical composition, methods of testing, and other relevant data.

Products that have been prequalified by Materials and Research and are included on the Qualified Products List (QPL) may be used on projects without further testing, unless noted on the QPL, but a Certificate of Compliance for the qualified products will be required. The Qualified Products List is updated annually, or more frequently if warranted by substantial changes to the list, and may be requested from the Bureau of Materials and Research. A product that is not listed will not be used until qualified through written request to Materials and Research. Such request should be made with sufficient lead-time to allow necessary testing or research.

**106.05 Plant Inspection.** The Engineer may inspect materials at the acquisition or manufacturing source. Manufacturing plants may be inspected for compliance with specified manufacturing methods. Material samples will be obtained for testing for compliance with materials quality requirements. This may be the basis for acceptance of manufactured lots as to quality.

In the event plant inspection is undertaken, the following conditions shall be met:

1. The Engineer shall have the cooperation and assistance of the Contractor and the producer of the materials.

2. The Engineer shall have full access at any time to all parts of the plant concerning the manufacture or production of the materials being furnished.
3. If required by the Contract, a building shall be provided for the use of the Inspector in which to house the test equipment and perform the required tests. The building shall be located conveniently near the plant, and independent of any use by the material producer.
4. Adequate safety measures shall be provided and maintained.

**106.06 Storage and Handling of Materials.** Materials shall be stored, handled and transported to preserve their quality and fitness for the Work.

Materials shall be stored to facilitate prompt inspection and will be subject to inspection and retesting before incorporation in the Work in accordance with 106.03.

Approved portions of the right-of-way may be used for storage of materials and the Contractor's plant and equipment, provided that clear zone restrictions specified in Section 619 are met. If approved, any clearing, grubbing, topsoil removal, and other preparation work or restoration for storage areas shall be at the Contractor's expense.

Additional space required shall be provided at the Contractor's expense and option. Private property shall not be used for storage purposes without written permission of the owner, or lessee and owner. Copies of such written permission shall be furnished to the Engineer and shall include proposed erosion control and site restoration measures.

Storage and plant sites shall be restored to their original condition, or as directed, by and at the Contractor's expense.

Erosion control measures, including dust control required for stockpiles of materials subject to wind or water erosion, shall be by and at the Contractor's expense.

**106.07 Unacceptable Materials.** Materials not meeting the requirements of the Contract will be considered unacceptable and will be rejected and shall be removed immediately from the project unless the defects are corrected and approved by the Engineer. Should the Contractor fail to remove defective materials within the time indicated by the Engineer in writing, the Engineer will have the materials removed at the Contractor's expense.

**106.08 Department-Furnished Material.** Material furnished by the Department will be delivered or made available to the Contractor at the locations specified in the Contract.

The cost of handling and placing Department-furnished materials after delivery to the Contractor shall be included in the Contract price for the item in which they are used. The Contractor is responsible for materials delivered. Deductions will be made from any moneys due for any shortages, deficiencies, and damage that may occur to the material after delivery. Demurrage charges, resulting from the Contractor's failure to accept the material at the designated time and location of delivery, will also be deducted from moneys due the Contractor.

**106.09 Conservation of Gravel Deposits.** The Contractor shall make all reasonable efforts to conserve gravel deposits. Unless specifically authorized, gravel shall not be utilized in making deep fills, backfilling swamps, or dressing slopes. Gravel deposits encountered in the excavation shall be used in the several gravel items in the Contract when directed. Disposal of strippings, overburden, and unsuitable material shall be made in such a manner that usable gravel deposits will not be covered.

**106.10 Disposal of Surplus and Waste Materials.** When practicable and whenever directed, surplus and waste material shall be disposed of by flattening slopes or for other grading within the project. When specified as embankment-in-place surplus or stockpile surplus, the material shall be placed as shown on the Plans or as directed in the Proposal in accordance with the appropriate specification. In case it is impossible to dispose of all the surplus and waste material in the manner described above, it shall be the Contractor's responsibility to secure disposal areas for surplus and waste materials. Disposal

## SECTION 106

Agreements, as provided by the Department, for such areas must be submitted to the Engineer for approval. The following form shall be completed and submitted for each disposal area.

Rev. 2002	
<b>STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION DISPOSAL AGREEMENT</b> (This does not apply to disposal areas operated by a public agency)	
Project _____	Project Number(s) _____
Property Owner(s) _____	Location _____
<p>This form sets forth the conditions under which the Department will approve the disposal of surplus or waste material by a Contractor who, under contract as an agent of the Department, seeks to open and operate a disposal site on the referenced property in accordance with Sections 106, 201 and 203 of the New Hampshire Department of Transportation Standard Specifications for Road and Bridge Construction applicable to the referenced project.</p>	
<p><b>By signature herein, the Contractor (agent) and the property owner(s) acknowledge and agree to the following conditions and specifications subject to Departmental approval:</b></p>	
<p>(1) Prior to the start of disposal operations, this agreement shall be executed by the Contractor, the property owner(s), and the Department's Contract Administrator, with written approval received from the Department.</p>	
<p>(2) The Contractor shall not dispose of material considered to be hazardous or injurious to public welfare, including contaminated soils and asbestos, except as permitted by federal, state and local regulations. Solid waste shall be disposed of according to all federal, state and local regulations.</p>	
<p>(3) Prior to the start of disposal operations, the Contractor shall complete an Historic and Archaeological Resources certification in accordance with the Contract, for areas affected by the disposal, or by any haul road constructed for access to the disposal area.</p>	
<p>(4) Prior to the start of disposal operations, the Contractor shall investigate impacts on existing wetlands by arranging for a qualified person recognized by the Department of Environmental Services (NHDES) capable of performing such an investigation. The Contractor shall apply to, and receive from the NH Wetlands Bureau, any wetlands permit(s) required prior to the start of disposal operations.</p>	
<p>(5) Pursuant to Executive Order 11988, dated May 24, 1977, the Contractor shall not dispose of materials within the boundaries of any floodway, or within the limits of any 100 year floodplain, or within any area that violates Executive Order 11988 without the expressed written permission of appropriate federal, state, and local agencies. It shall be the responsibility of the Contractor to ascertain and mark the boundaries of such floodway and floodplain using available information from federal, state or local resources.</p>	
<p>(6) Approval by the Department to open and operate the disposal area will expire at the specified or extended completion date of the project. Access roads to the area adjacent to highways shall be obliterated unless permission is given by the Department to preserve such access roads. If the Contractor has removed screening trees and brush between the highway and the disposal area, the area shall be replanted to provide a screen in a zone along the edge of the pit as directed by the Department.</p>	
<p>(7) Disposal or transportation of material by the Contractor shall not be exempt from local zoning or other applicable ordinances. The Contractor shall apply directly to local municipalities for possible exemptions to such ordinances.</p>	
<p>(8) Disposal of brush from clearing and grubbing operations shall be as specified in Section 201 of the Standard Specifications. Disposal of surplus and waste material from roadway excavation shall be as specified in Section 203 of the Standard Specifications. Reclamation of the disposal area shall meet the</p>	

requirements of **RSA 155-E:5,I,II,III,IV, and V** (for excavation sites) prior to acceptance of the project.

Prior to acceptance of the project, the Contractor shall finish the disposal area in accordance with the noted RSA's and applicable specifications. By the box(es) checked below, the property owner(s), the Contractor, and the Department's Contract Administrator shall agree on the specific minimum landscaping treatment required in order for the reclamation to be acceptable to the Department:

- ☐ The entire area is to be fertilized and seeded.
- ☐ The entire area is to be planted with seedlings.
- ☐ Part of the area is to be seeded and the remainder planted with seedlings as agreed below.

Seedlings shall be \_\_\_\_\_  
 (Age or size, species, variety)  
 planted 8 feet center to center, or \_\_\_\_\_.  
 (Spacing)

Additional landscaping required and any pertinent information desired to be a part of the official record is ☐ attached, or ☐ noted below:

Landscaping provisions approved by: \_\_\_\_\_  
 NHDOT Contract Administrator Date

The Contractor's attention is directed to **RSA 482-A:3**, the requirements of which must be fulfilled if this disposal area involves excavation or dredging of wetlands. Furthermore, the Contractor's attention is directed to **RSA 483-B** and **RSA 485-A:17**, the provisions of which must be fulfilled if this disposal operation involves filling on the border of the surface waters of the state or will significantly alter the characteristic natural runoff or create an unnatural runoff; and **RSA 149-M** if the Contractor intends to dispose of solid waste, including stumps. The Contractor's attention is also directed to Section 10 of the Rivers and Harbors Act of 1899, and Sections 401 and 404 of the Clean Water Act, for which compliance may require a permit for work in or affecting "navigable waters of the U.S.," or material placed in "waters of the U.S.," including wetlands. The Contractor's attention is also directed to Executive Order 11990 if this disposal area will affect wetlands.

_____ Signature of Owner	_____ Date	_____ Name(s) of Joint Owner(s)
_____ Street		_____ Street
_____ Town	_____ State	_____ Town
		_____ State
_____ Contractor	_____ By (Signature)	_____ Date

If joint owners are involved, the Owner signing should give all other names and addresses. Separate forms should be filed in connection with adjacent owners.

Distribution: ☐ Contract Administrator ☐ Construction Bureau ☐ Engineering Audit  
☐ Property Owner ☐ Contractor

## SECTION 107

### ***SECTION 107 -- LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC***

**107.01 Laws to be Observed.** The Contractor shall keep fully informed with, and observe and comply with all Federal and State laws, all local laws and ordinances, and regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority, that affect individuals engaged or employed on the Project, or that affects the conduct of the Work on the Project.

The Contractor shall protect, defend and indemnify the Department and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor, Subcontractor(s) at any tier, suppliers of materials or services, or others engaged by the Contractor, or their employees.

The Engineer is to be notified immediately in writing if any discrepancy or inconsistency is discovered between the Contract and any law, ordinance, regulation, order or decree except as noted in 107.04.

The Contractor's attention is called to RSA 275:43 providing for weekly payment to employees and to RSA 235:37 relative to worker's compensation. The latter statute provides that the Commissioner of Transportation shall require every private Contractor engaged in construction or maintenance work by contract with the State, a county, a city or town, on any State, State-aid or town-aid highway or bridge project to file with the Commissioner of Labor and the Commissioner of Transportation of this State a declaration of acceptance of the provisions of RSA Chapter 281-A, Worker's Compensation, as amended, before any Work is begun on such project.

The Contractor shall erect and maintain a bulletin board on which to post the notices, rates, and related items that are required to be posted. Unless the Plans indicate otherwise, the board shall be approximately but not less than 6 ft wide by 3 ft high (2 m wide by 1 m high) and properly mounted. A transparent material shall be installed to protect the papers posted on the bulletin board from the elements. The papers shall be maintained in easily readable condition during the construction period.

The bulletin board shall be set up in a conspicuous location near or at the Contractor's field office if such office is maintained. If the Contractor does not have a field office, the board shall be posted at the site of the work in a prominent and accessible place where it can be easily seen by all workers. The bulletin board shall remain the property of the Contractor and shall be removed upon completion of the Work.

Except for Work done under items in the Contract, work prescribed herein will not be paid for separately but will be considered as subsidiary.

The Contractor's attention is further called to RSA 281-A:18 which reads in part:

**“281-A:18 Contractor's Liability for Subcontractors.** A contractor who subcontracts all or any part of a contract shall bear the liability of the subcontractor of that contract for the payment of compensation under this chapter to the employees of the subcontractor, unless the subcontractor has secured the payment of compensation as provided for in this chapter. Any contractor who shall become liable for compensation under this section may recover the amount of the compensation paid and necessary expenses from the subcontractor. ...”

The Contractor's attention is further called to RSA 266:72 which reads in part:

**“266:72 Spillage of Material.**

I. No vehicle shall be driven or moved on any way unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, sifting, leaking or otherwise escaping therefrom, except that sand may be dropped for the purpose of securing traction, or water or other substance may be sprinkled on a way in cleaning or maintaining such way.

II. No person shall operate on any way any vehicle with any load unless said load and any covering thereon is securely fastened so as to prevent said covering or load from becoming loose, detached or in any manner a hazard to other users of the way. Without

limiting the foregoing provision, no person shall drive on any way any open vehicle loaded with earth, sand, asphalt, stone, gravel or other particulate substance unless said vehicle is equipped with and said load is entirely covered and secured by a close-fitting tarpaulin or similar covering which prevents the escape of any substance from said load onto the way. ... ..

III. Any person who violates the provision of this section shall be guilty of a violation if a natural person, or guilty of a misdemeanor if any other person. Any person shall be liable to the state or town for any damage done to the way by spillage.

IV. The provisions of paragraphs I, II, II-a, and III of this section shall not apply to a local farmer transporting his own farm products or materials incidental to his farming operations where such transporting requires incidental use of a way provided that such farmer shall not thereby be relieved of his duty to exercise reasonable care in carrying on such operations.

V. The provisions of paragraph II and II-a shall not apply to:

- (a) The operation of highway building equipment as defined in RSA 259:42 and motor vehicles used in the construction of highways provided that such equipment or motor vehicle is used within a highway construction zone as prescribed by the Commissioner of Transportation provided that the driver of any such vehicle shall not thereby be relieved of his duty to exercise reasonable care;
- (b) The operation of municipal and state highway maintenance equipment;
- (c) The driving of any vehicle on a way at speeds of less than 30 miles per hour.” (50 km/h)

Extensions to a Construction Zone allowed by the Commissioner will not waive the requirement for covered loads beyond such limits.

---

Projects in this State occur within watersheds under the management of the New Hampshire Department of Environmental Services, Water Division (WD). The purpose of part Env-Ws 1700 of the NH Code of Administrative Rules is to “establish water quality standards for the States’s surface water uses as set forth in RSA 485-A.” The Contractor must take extraordinary and sufficient precautions to prevent the runoff of fuels, oils, bitumens, calcium chloride, or other polluting materials, harmful to humans, fish, or other life, into the water supplies and surface waters of the State.

Unless otherwise permitted by the WD, control measures, must be adequate to assure that turbidity in the receiving water due to the runoff of silt and clay will not be increased to more than ten (10) nephelometric turbidity units (NTU.) above naturally occurring conditions in Class B waters. Class A waters shall contain no turbidity, unless naturally occurring. Proper planning and scheduling of construction operations are major factors in controlling erosion. Construction of drainage facilities and performance of other Work which will contribute to the control of erosion and sedimentation shall be carried out concurrently with earthwork operations or as soon thereafter as practicable. Where there is a high potential for erosion and subsequent water pollution, the duration of the exposure of the uncompleted construction to the elements shall be kept to a minimum. Fine material placed or exposed during the Work shall be so handled and treated as to minimize the possibility of its reaching any stream or water supply. Diversion channels, dikes, sediment traps, and any other effective measures may be used. Where applicable and unless otherwise permitted where an alternate procedure would be mutually acceptable, before water shall be allowed to run into any ditch or channel, the waterway shall be prepared with permanent erosion control measures so that the waterway will be safe against erosion. Prior to beginning the work, the Contractor shall submit a schedule of operations indicating the special precautions which are proposed to control erosion.

Special precautions shall be taken in the use of construction equipment to minimize erosion. Wheel tracks shall not be left where erosion might begin. Wherever crossing of live streams is necessary, temporary culverts or bridges shall be constructed to allow equipment to cross. Fording of streams shall

## SECTION 107

not be permitted unless approved by the Engineer and appropriate permits have been obtained. Disturbance of lands and waters that are outside the limits of the construction as staked will be prohibited except as may be found necessary and ordered.

All waterways shall be cleared as soon as practicable of falsework, piling, debris, or other obstructions placed during construction operations and not a part of the finished Project.

Prior to suspension of construction operations for appreciable lengths of time, the Contractor shall shape the earthwork in a manner that will permit storm runoff with a minimum of erosion. Temporary erosion and sediment control measures such as berms, dikes, slope drains, or sedimentation basins shall be provided and maintained until permanent drainage facilities and erosion control features have been completed and are operative.

The Contractor's attention is called to RSA 482-A:3 which reads in part:

**“482-A:3 Excavating and Dredging Permit; Certain Exemptions .** I. No person shall excavate, remove, fill, dredge or construct any structures in or on any bank, flat, marsh, or swamp in and adjacent to any waters of the state without a permit from the department (NHDES). The permit application together with a detailed plan and map showing the exact location of the proposed project, along with 4 copies of the permit application, plan and map, shall be submitted to the town or city clerk, accompanied by a filing fee in the form of a check made out by the applicant to the New Hampshire. ...”

and RSA 485-A:17 which reads in part:

**“485-A:17 Terrain Alteration.** I. Any person proposing to dredge, excavate, place fill, mine, transport forest products or undertake construction in or on the border of the surface waters of the state, and any person proposing to significantly alter the characteristics of the terrain, in such a manner as to impede the natural runoff or create unnatural runoff, shall be directly responsible to submit to the department (NHDES) [Water Division] detailed plans concerning such proposal and any additional relevant information requested by the division, at least 30 days prior to undertaking any such activity. ...”

---

In order to prevent the dissemination of harmful or destructive plants or insects , no person shall knowingly collect, transport, sell, distribute, propagate, transplant or release any living and viable portion of any plant or any insect species listed in Table 3800.1 of Part AGR 3802 of the New Hampshire code of Administrative Rules.

Complete information may be secured from State and Federal Plant Pest Control Officials.

---

The Contractor shall also protect the atmosphere from particulate and gaseous pollutants in conformance with rules promulgated by the New Hampshire Department of Environmental Services, Air Resources Division.

The Contractor's attention is called to Part Env-A 1000 Prevention, Abatement and Control of Open Source Air Pollution; which reads in part:

Env-A 1001.04 General Open Burning Requirements. Open burning in any part of the state shall be permissible when the burning:

- (a) Is conducted in accordance with all local ordinances;
- (b) Is authorized by an official having jurisdiction over open burning, whenever authorization is required;
- (c) Does not create a nuisance; and
- (d) Includes only materials burned in conformance with this part.



The Air Resources Division may order unauthorized burning to cease and may order authorized burning creating a nuisance to cease. The order may be issued directly to the Contractor or to the Contractor through the Engineer.

**107.02 Permits, Licenses, and Taxes.** The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the Work. The costs for all charges, fees, and taxes shall be included in the unit prices bid for the various items of the Contract. Necessary permits from the proper authorities for the Work as shown on the Plans or indicated in the Proposal in coastal and inland waters and wetlands within the State have been or will be obtained by the Department as described in the Prosecution of Work. It will be the Contractor's responsibility to secure permits, variances, or modifications to the permits secured by the Department for additional work not shown on the Plans or work necessary for the Contractor's method of construction. Additional work shall not begin until permits, variances, or modifications have been obtained.

Permit applications for Work within waters of the State are obtainable from the Wetlands Bureau, State of New Hampshire, Department of Environmental Services, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095, or from their website at [www.des.state.nh.us/wetlands](http://www.des.state.nh.us/wetlands). Applications may also be obtained from town and city clerk offices. This permit process may take 60 days or more to complete. Furthermore, if warranted, additional time should be allowed for a public hearing in accordance with RSA 482-A:8.

The Contractor is further notified that if the total project impact to wetlands under the jurisdiction of the Army Corps of Engineer (ACOE) (work shown on the Plans plus additional work proposed by the Contractor) is between 3000 ft<sup>2</sup> and 3 acres (280 m<sup>2</sup> and 1.2 ha), the State permitting process is subject to Federal review. The U.S. ACOE will notify the applicant within 30 days after issuance of the State permit if a Corps of Engineers individual permit is required. If the total project impact to jurisdictional wetlands exceeds 3 acres (1.2 ha), then an ACOE individual permit is required and the application is subject to a Federal public hearing which may require submission of additional information to the ACOE.

The attention of the Bidder is called to RSA Chapter 293-A, Business Corporation Act, which, among other provisions, requires that out-of-state corporations obtain a certificate of authority to do business in the State from the Secretary of State; to RSA Chapter 305-A, Registration of Foreign Partnerships, which, among other provisions, requires that every foreign partnership desiring to do business in this State shall register with and obtain a certificate of authority to do business in the State from the Secretary of State; and to RSA Chapter 349, Trade Names, which, among other provisions requires that every sole proprietor doing business in this State under any other name than their own shall register the trade name of such business, and that every person, proprietorship, partnership, or association, engaged in the conduct of any business, enterprise, venture, or activity within the State under a trade name, firm, or style shall, subject to limitations, file in the office of the Secretary of State a certificate signed and sworn to by such person or proprietorship or by members of such partnership or association stating the name under which the business is to be conducted, the principal place of said business, and a brief description of the kind of business to be carried on, with the names and addresses of the principal parties engaged therein.

The Contractor's attention is further called to RSA 72-B, Excavation Tax and Excavation Activity Tax and related administrative rules of the Department of Revenue Administration, which among other provisions, levies a tax on earth and excavations as defined in RSA 155-E.

---

Bidders with the word "Engineer" or any form of such word in the name of their business should review RSA 310-A:20, which prohibits the Secretary of State from issuing a certificate of incorporation to any business or registering a foreign business organization with any derivative of the word "Engineer" in its name or which practices engineering until the business organization obtains a certificate of authorization from the State Board of Licensure for Engineers.

## SECTION 107

---

The Contractor's attention is further called to RSA 80:7, RSA 80:7a, RSA 80:7b, and RSA 80:7c which read:

**“80:7 Contractors' Taxes.** Whenever any person, firm or corporation enters into a contract or agreement with the state or any political subdivision thereof it shall be a term or condition of such contract that the state or such political subdivision shall withhold or retain from the contract price provided for in such contract such sum or sums as will secure the payment of the taxes levied and assessed against the property of such contractor or against the property for which such contractor may be liable for the payment of taxes thereon, until such taxes are paid by such contractor, or are authorized paid by him from the sums so withheld, provided the collector of taxes or other person responsible for the collection of such taxes notifies the treasurer of the state or political subdivision that such taxes have been assessed but are unpaid. Such notice shall not be given to the treasurer as aforesaid until the expiration of a period of ten days after the collector or other person responsible for the collection of the taxes has presented or sent by first class mail, postage prepaid, addressed to the last known address of such contractor a tax bill, or a duplicate or copy of the tax bill presented or sent to a subcontractor or lessee for the payment of whose taxes said contractor is liable together with a notation to said contractor stating therein a date certain when said collector or other person responsible for the collection of such taxes will notify the treasurer as aforesaid. If the taxes so assessed are not paid by the person, firm or corporation liable therefore by December first of the year of assessment, the treasurer, upon notice from the collector of taxes that the taxes remain unpaid, shall pay over the amounts withheld to the collector and take his receipt therefore which shall be a full and complete discharge of the treasurer from any further liability for the sum so withheld. If on December first the person, firm or corporation is not entitled to sufficient sums under the contract from which the treasurer can withhold the amount of taxes due, the treasurer as soon thereafter as sufficient sums are available for the purpose shall immediately pay over to the collector the sums so withheld. If the person, firm or corporation shall pay to the collector the taxes for which he or it is liable after notice to withhold by the collector to the treasurer, the collector shall immediately notify the treasurer so withholding, and the sum so withheld shall be paid to the person, firm or corporation, if otherwise due.

**80:7-a Subcontractors' Taxes.** Whenever a person, firm or corporation enters into a contract or agreement with the state or any political subdivision thereof and such contractor employs a subcontractor to perform any of the work contemplated by such contract or agreement, it shall be a stated term or condition of such contract, that said contractor will be liable for the payment of any taxes assessed in the name of and upon the property of the subcontractor, used by said subcontractor in the performance of said subcontract if assessed while said contract is being performed, to the extent of any sum or sums that may be due from the contractor to the subcontractor at the time of or after the contractor has been notified by the collector of taxes in writing that payment of said taxes has been demanded of said subcontractor but said subcontractor has failed, neglected or refused to pay the same. Said contractor may retain from the contract price the amount for which he is liable hereunder. The amount of the taxes for which the said contractor may be liable hereunder may be withheld or retained from the contract price under the provisions of RSA 80:7.

**80:7-b User's Taxes.** Whenever a person, firm or corporation enters into a contract or agreement with the state or any political subdivision thereof and such contractor has in his possession and uses any taxable property owned by another upon the job to be performed under the contract or agreement, it shall be a stated term or condition of such contract that the contractor having such property in his possession shall be liable for the

amount of taxes assessed against such property in the name of the owner of such property while the same is in the possession of such contractor to the extent of the amount of any sum or sums of money that may be due from said contractor to the owner of such property for rental or hire thereof at the time of or after the collector of taxes has notified said contractor in writing that he has made demand upon the owner of such property for payment of the taxes assessed upon said property but that the owner of such property has failed, neglected or refused to pay said taxes. Said contractor may retain from the sums to be paid for the use of such property the amount for which he is liable hereunder. The amount of the taxes for which the said contractor may be liable hereunder may be withheld or retained from the contract price under the provisions of RSA 80:7.

**80:7-c Exemption from Attachment.** The sums so withheld by the treasurer of the state or any political subdivision thereof upon notice from a collector of taxes under the provisions of RSA 80:7 and the sums so withheld and to be withheld by any contractor under the provisions of 80:7-a and 80:7-b shall be exempt from attachment, garnishment and trustee process by any person except in an action or suit brought by the collector of taxes to collect such taxes.”

**107.03 Patented Devices, Materials, and Processes.** If the Contractor employs any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and Contract Surety shall defend and indemnify the Department, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented or copyrighted design, device, material or process, or any trademark or copyright.

The Contractor shall indemnify the Department from costs, expenses, and damages that may be obligated for payment by reason of an infringement during the prosecution of the Work or after the completion of the Project.

**107.04 Federal Aid Participation.** When any Federal laws, rules, or regulations are in conflict with any provisions of a federally assisted Contract, the Federal requirements shall prevail, take precedence, and be in force over and against any such conflicting provisions.

If there is Federal participation in the cost of the Contract, the Work shall be under the supervision of the Department but subject to the inspection and approval of the proper officials of the United States Government. Inspections made by authorized Federal representatives shall not make the United States Government a party to the Contract and will not interfere with the rights of the Contract parties.

**107.05 Sanitary, Health, and Safety Provisions.** The rules and regulations of Federal, State, and local health officials shall be observed. No employees of the Contractor or Subcontractor(s) shall be required to work in surroundings, or under conditions that are unsanitary, hazardous, or dangerous to their health or safety. Any inspector of the OSHA or other legally responsible agency involved in safety and health administration shall be admitted without delay and without presentation of an inspection warrant to all areas of the Work and Project upon presentation of proper credentials.

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees and Department representatives as may be necessary to comply with the requirements of the State Board of Health, or of other bodies or tribunals having jurisdiction. Except as provided under Section 698, this work shall be subsidiary.

The Federal occupational safety and health standards comprise Part 1910 and Part 1926 respectively of Title 29 of the Code of Federal Regulations and are amended periodically in the Federal Register. In case any revisions in the Code of Federal Regulations are published, such revisions will be deemed to supersede the appropriate Part 1910 and Part 1926, and be effective as of the date set forth in the revised regulation.

The Contractor's attention is directed to RSA Chapter 277, Safety and Health of Employees, which among other provisions, states rules regarding elevators and scaffolding at construction sites.

## SECTION 107

In protecting employees from hazardous or toxic exposure, RSA Chapter 277-A, Toxic Substances In The Workplace, states that the employees have the right to know relative to possible toxic substances in the workplace and RSA 277-A:5, in part, states that the employers shall inform employees as to possible contact with toxic materials and conduct education and training programs.

**107.06 Public Convenience and Safety.** Construction shall be conducted in a manner so that obstructions to traffic are minimized. The safety and convenience of the public and the protection of persons and property shall be provided as specified under 104.07. The safety provisions of all laws, rules, codes, and regulations applicable to the class of work being performed shall be followed.

No footways, gutters, sewer inlets, or portions of highways adjoining the highway under construction shall be obstructed more than is necessary. Fire hydrants and water holes for fire protection on or adjacent to the highway shall be kept accessible to the fire apparatus at all times and no obstructions shall be placed within ten feet (three meters) of any such facility. The Contractor shall be responsible for proper and timely notification to local residents prior to any interruptions of their access or services. In the event that all or part of the highway is officially closed to traffic during construction, the Contractor shall provide and maintain safe and adequate traffic accommodations for residences and businesses along and adjacent to the highway so closed.

Except for work done under items in the Contract, work prescribed herein will not be paid for separately but will be considered as subsidiary.

**107.07 Barricades and Warning Signs.** The Contractor shall provide, erect, and maintain barriers, barricades, lights, signals, signs, and other traffic control devices, and shall take all necessary precautions for the protection of the Work and safety of the public. Highway sections closed to traffic shall be protected by effective barriers and barricades. Obstructions shall be illuminated during darkness. Warning signs shall be provided to control and direct traffic.

The Contractor shall erect warning signs in advance of operations that may interfere with the use of the road by traffic and where the new work crosses or coincides with an existing road. Warning signs shall be placed according to the Traffic Control Plan and maintained in accordance with the Contract. Signs, barriers, barricades, lights or other protective devices shall not be dismantled or removed without permission of the Engineer.

The Contractor will be held responsible for all damage to the Work from traffic, pedestrians, animals, or any other cause due to lack of adequate protective devices.

All barricades, warning signs, lights, temporary signals, and other protective devices shall conform with the MUTCD and Section 619.

**107.08 Use of Explosives.** All laws, ordinances and regulations, including the rules of the Director of State Police as well as Part 1926 - Safety and Health Regulations for Construction (OSHA) of Title 29 of the Code of Federal Regulations and the appropriate parts of Title 30, whichever is the most restrictive, shall be followed in the use, handling, loading, transporting, and storing of explosives and blasting agents.

The Contractor's attention is called to RSA Chapter 158 which gives the Director of the Division of State Police the authority to regulate the sale, storage, handling, transportation, inspection, administration and use of explosives or explosive substances.

Explosives used in the prosecution of the Work shall not endanger life, property or new work. The Contractor shall be liable for all property damage, injury, or death resulting from the use of explosives.

The Contractor shall notify each property owner and public utility company having structures or facilities close to the Work of any intention to use explosives. The notice shall be given sufficiently in advance to enable the owners to protect their property.

All explosives shall be stored in a secure manner. All storage places shall be clearly marked. Explosives shall be stored in a magazine which shall be located in respect to buildings, railways, and highways in a manner as required by the Director of State Police.

Explosives shall be used only during daylight hours, shall be handled only by competent workers, and particular care shall be taken to insure that no unexploded charges remain in the Work.

All persons within the danger zone of blasting operations as determined by the blasting contractor (per 203.3.2.5.12) shall be warned and no blasting shall be done until the zone has been cleared. Sufficient flaggers shall be stationed outside the danger zone to stop all approaching traffic during blasting operations.

**107.09 Protection and Restoration of Property and Landscape.** Public and private property shall be preserved in the prosecution of the Work. Land monuments and property markers shall not be moved, disturbed or damaged until the Engineer has witnessed or referenced their location.

The Contractor is responsible for damage to public and private property resulting from any act, omission, neglect, misconduct in the Contractor's method of executing the work, defective work or materials, or failure to perform the Contract. This responsibility shall not be released until Completion and Acceptance.

Damaged property shall be restored to a condition similar or equal to that existing before the damage or injury occurred. The repairing, restoring, rebuilding, or making good of such damage or injury shall be at the Contractor's expense.

If the Contractor fails to repair, restore, rebuild or make good such damage or injury, the Engineer, after 48 hours notice, may proceed to do so, and the cost thereof will be deducted from any money due or which may become due the Contractor under the Contract.

**107.09.1 Cultural Resources.** When construction operations encounter historic or Native American artifacts of archeological significance, operations shall be immediately suspended in the area and the Engineer notified. The Engineer will contact the State archaeological authorities to determine the disposition of the remains or artifacts. The Contractor may be ordered to excavate the site to preserve the objects encountered and remove and deliver them to the custody of the proper State authorities. Such work will be paid for as Extra Work and Contract adjustments will be made according to 104.06.

When construction operations encounter human remains, operations in the immediate area shall be temporarily discontinued and the Contractor shall notify the Engineer who will notify state and local police. The County Medical Examiner will determine whether the remains require a criminal or archaeological investigation. The Contractor will be given notice to continue work in the area when the investigation is completed and after removal of the remains by others.. The Contractor shall maintain a 25-foot buffer zone around known cemeteries. If the contract specifies work within the buffer zone or cemetery contact the NHDOT Cultural Resource Manager 2 weeks prior to beginning work in that area. The Contractor's attention is directed to RSA 227-C:8 a-g, RSA 290 and RSA 635 dealing with cemeteries and human remains.

**107.10 Forest Protection.** Work within or adjacent to State or National Forests shall be accomplished under the rules and regulations of the State Fire Marshal, State Forest Fire Control Supervisor, Department of Resources and Economic Development, Department of Fish and Game, National Forest Supervisor, or other authority having jurisdiction governing the protection of forests. Sanitary laws and regulations regarding the performance of work within or adjacent to State or National Forests must be obeyed. The Contractor shall keep the project site in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks, and other structures in accordance with the regulations and instructions issued by the Forest Supervisor.

Forest fires shall be prevented and suppressed. The Contractor shall require employees and Subcontractors, both independently and at the request of forest officials, to prevent and suppress and to assist in preventing and suppressing forest fires and to notify a forest official of the location and extent of any fire. The requirements as to burning are as follows:

No open burning shall be done by the Contractor without advance written approval from the New Hampshire Department of Environmental Services, Air Resources Division (see 107.01). The Contractor shall abide by such rules and directions as are prescribed by the local forest fire warden or the forest

## SECTION 107

ranger of the New Hampshire Department of Resources and Economic Development, Division of Forest and Lands, or both.

**107.11 Responsibility for Damage Claims.** The Contractor shall indemnify, defend and save-harmless the State, adjoining states, cities or towns, the railroad where operations will affect railroad property, and all of their officers, agents, and employees from and against any and all claims, liabilities, suits or penalties arising out of (or which may be claimed to arise out of) acts or omissions of the Contractor or Subcontractors in the performance of work covered by the Contract. This responsibility shall survive the termination of the Contract. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved by the State.

- A. Liability insurance for damages imposed by law of the kinds and amounts specified herein shall be obtained and maintained by the Contractor. The insurance obtained shall cover all operations under the Contract whether performed by the Contractor or Subcontractor of any tier and shall be maintained until Acceptance.
- B. Before submittal of the Contract to Governor and Executive Council for approval, certificates of insurance in the standard form employed in the State of New Hampshire by underwriters licensed or approved by the Department of Insurance shall be furnished evidencing the required coverages and conditions. In addition, the underwriters must have a rating of no less than B+ based on the current A.M. Best rating guide. The Contractor shall have a continuing duty to provide new certificates of insurance as policies are amended or renewed. The minimum required insurance coverages and conditions are as follows:
  - 1. Workers' Compensation and employers liability as required by law.
    - Limits of Liability: \$100,000 each accident;  
\$500,000 disease - policy limit;  
\$100,000 disease - each employee.
    - Deductible, if applicable, to be shown on certificate.
  - 2. Commercial General Liability; Occurrence Form, to include Contractual Liability (see Indemnification Clause), Explosion, Collapse and Underground coverages.
    - Limits of Liability: \$1,000,000 Each Occurrence Bodily Injury & Property Damage;  
\$2,000,000 General Aggregate-Include Per Project Aggregate Endorsement;  
\$2,000,000 Products/Completed Operations Aggregate.

or

Comprehensive General Liability Form; to include Premises/Operations, Independent Contractors, Products/Completed Operations, Personal Injury, Contractual Liability (see Indemnification Clause), Collapse and Underground, Medical Payment coverages (Broad Form Comprehensive GL Endorsement)  
\$1,000,000 Combined Single Limit of Liability for Bodily Injury & Property Damage.

Note: If blasting or demolition or both is required by the Contract, the Contractor or Subcontractor shall obtain the respective coverage and shall furnish to the Engineer a Certificate of Insurance evidencing the required coverages prior to commencement of any operations involving blasting or demolition or both.

- 3. Owner's Protective Liability Coverage for the benefit of the State of New Hampshire Department of Transportation.
  - Limits of Liability: \$2,000,000 Each Occurrence;  
\$3,000,000 Aggregate.

or

\$2,000,000 Bodily Injury & Property Damage per occurrence (1973 form).

4. Comprehensive Automobile Liability covering all motor vehicles including owned, hired, borrowed and non-owned vehicles.  
Limits of Liability: \$1,000,000 Combined Single Limit for Bodily Injury & Property Damage.
5. Commercial Umbrella Liability  
Limits of Liability: \$1,000,000 Each Occurrence;  
\$1,000,000 Aggregate.
6. Railroad Protective Liability if the Contract involves work on, over, under or within 20 feet of the right-of-way of the railroad, on behalf of and payable to the railroad company and, if applicable, to the owner of the railroad corridor specified in the Prosecution of Work. Combined Single Limit of Liability for Bodily Injury and Property Damage.  
  
Limits of Liability: \$2,000,000 per Occurrence;  
\$6,000,000 Aggregate
7. General Insurance Conditions  
(a) Each policy shall contain a clause prohibiting cancellation or modifications of the policy earlier than 30 days, or 10 days in cases of non-payment of premium, after written notice thereof has been received by the Department.
8. Builder's Risk Insurance: The Contractor shall insure the work included in the Contract on an "All Risk" basis, on one hundred percent (100%) completed value basis of all building construction. This coverage shall specifically insure all landscape plantings on a one hundred percent (100%) completed value basis. Coverage need not include work involving parking areas, driveways, roads or bridges. Builder's Risk coverage shall include materials located on-site, in-transit, and at any temporary site. The policy by its own terms or by endorsement shall specifically permit partial or beneficiary occupancy prior to completion or acceptance of the entire work. The policies shall be in the names of the State Agency and the Contractor. The policies shall provide for the inclusion of the names of all other Contractors, Subcontractors, and others employed on the premises as insureds. The policies shall stipulate that the insurance companies shall have no right of subrogation against any Contractors, Subcontractors or other parties employed on the premises.
9. Additional types of coverage may be established and required in the Proposal. Insurance requirements described above shall be the responsibility of the Contractor. The Contractor may require Subcontractors to maintain similar coverage.

**107.12 No Third Party Beneficiary.** It is specifically agreed between the parties executing this Contract that it is not intended by the Contract provisions to make the public or any member thereof a third party beneficiary hereunder, or to authorize anyone not a party to the Contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the Contract. The duties, obligations, and responsibilities of the parties to this Contract with respect to third parties shall remain as imposed by law.

**107.13 Personal Liability of Public Officials.** The Department's authorized representatives are acting solely as agents and representatives of the Department when carrying out and exercising the power or authority granted to them under the Contract. There shall not be any liability on them either personally or as employees of the Department. No part of this Contract shall be understood to waive the sovereign immunity of the State.

**107.14 No Waiver of Legal Rights.** Acceptance will not prevent the Department from correcting any measurement, estimate, or certificate made before or after completion of the Contract. The Department will not be prevented from recovering, from the Contractor or Surety or both, overpayments

## SECTION 107

sustained for failure to fulfill the obligations under the Contract. A waiver on part of the Department of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor is liable to the Department for latent defects, fraud or such gross mistakes as may amount to fraud, or as regards the Department's rights under any warranty or guaranty without prejudice to the terms of the Contract.

**107.15 Civil Rights.** The Contractor shall comply with Federal, State and local laws, rules and regulations that set forth unlawful employment practices including that of discrimination because of race, religion, color, sex or national origin, and that define actions required for Affirmative Action and Disadvantaged Business Enterprise programs.

**107.16 Assignment Provision.** The Contractor hereby agrees that it will assign to the State all causes of action that it may acquire under the antitrust laws of New Hampshire and the United States as the result of conspiracies, combinations, or contracts in restraint of trade which affect the price of goods or services obtained by the State under this contract if so requested by the State.

**107.17 Hazardous Materials.** The Contractor shall also be aware of laws and regulations relating to hazardous materials which may be encountered during construction operations, either within project limits or at material sites off the project. The health and safety of employees, the general public, and the potential of damage to the overall environment is possible if hazardous materials are not recognized, reported, and the appropriate action taken to dispose of, remove from the site, or otherwise contain the possible contaminants.

State laws such as RSA141-E, Asbestos Management and Control, RSA 147-A, Hazardous Waste Management, and RSA 149-M, Solid Waste Management identify the major areas of concern. Parts Env-Wm 100-110, Env-Wm 101-300, 2100-3700 and Env-Wm 3900 of the New Hampshire Code of Administrative Rules identify various contaminants related to hazardous waste, solid waste and asbestos and their management respectively..

If any abnormal condition is encountered or exposed that indicates the presence of a hazardous material or toxic waste, construction operations shall be immediately suspended in the area and the Engineer notified. No further work shall be conducted in the area of the contaminated material until the site has been investigated and the Department has given approval to continue the work in the area. The Contractor shall fully cooperate with the Engineer and perform any remedial work as directed. Work shall continue in other areas of the Project unless otherwise directed.

Exposure to hazardous materials may result from contact with, but not necessarily limited to, such items as drums, barrels, other containers, waste such as cars, batteries, and building construction debris. Containers leaking unknown chemicals or liquids, abandoned cars leaking petroleum products, batteries leaking acid, construction debris which may include asbestos, or any other source of suspected hazardous material found within excavation areas or stockpiled on land within construction limits shall be referred to the Department of Environmental Services so that a proper identification of the materials may be made and disposal procedures initiated as required.

Disposition of the hazardous material or toxic waste shall be made under the requirements and regulations of the Department of Environmental Services. Work required to dispose of these materials shall be performed under a Supplemental Agreement or Contract item, if included in Contract. If the waste material disposal requires special procedures, the Department will make arrangements to dispose of the material.

## SECTION 108 -- PROSECUTION AND PROGRESS

**108.01 Subletting of Contract.** The Contractor shall not sublet, sell, transfer, assign, or dispose of any portion of the Contract or Contracts without written consent of the Department. The Contractor's



organization shall perform work amounting to not less than 50 percent of the total Contract bid amount unless a higher percentage is specified in the Contract. Items designated in the Contract as "specialty items" may be subcontracted and the cost of specialty items performed by subcontract may be deducted from the Total Bid amount before computing the amount of work required to be performed by the Contractor's own organization. Any subcontracts, or transfer of Contract, shall not relieve the Contractor, bonding company or Surety of liability under the Contract and Bonds.

For proposed subcontractor and/or lower tier subcontractor approval, the Contractor shall file a copy of the executed subcontract with the Bureau administering the Contract at least five working days prior to the requested subcontract work being started. Retroactive subcontract and/or lower tier subcontract agreements will not be allowed.

On Federal-Aid projects, it is a requirement that the following documents be incorporated in and made a part of every subcontract agreement (including lower-tier subcontract agreements): :

- Required Contract Provisions (FHWA-1273)
  - Disadvantaged Business Enterprise (DBE) Policy (SPECIAL ATTENTION item)
  - DBE Program Requirements (Standard Spec 103.06)
  - \*41 CFR 60-4.2 – Solicitations
  - \*41 CFR 60-4.3 – Equal Opportunity Clauses
  - Certified Payrolls Handout (Labor Compliance Office informational sheet)
  - U.S. Department of Labor wage rates entitled GENERAL WAGE DECISION (as contained in the contract)
- \* Applicable only to contracts or subcontracts in excess of \$10,000

For unforeseen work of a value less than \$10,000.00, the Contractor may obtain interim consent to sublet work from the Contract Administrator; provided Interim Consent to Sublet Form is executed between the two parties and the Contract Administrator. This interim consent to sublet work also requires submission of all documents noted above to the Bureau administering the Contract. Consent by the Bureau administering the Contract must be granted prior to any payment for work accomplished under this interim agreement process.

The Contractor shall not knowingly sublet, sell, transfer, assign, or dispose of any portion of the Contract or Contracts with any person or entity which, under any federal or state law or regulation, or by voluntary agreement, is currently debarred or disqualified from bidding for construction contracts or participating in construction projects in any jurisdiction of the United States, unless after disclosure of such ineligibility, such participation is authorized by appropriate federal and State authorities, including the Engineer. No payment will be made for work performed by any such contractor.

Submission of certified payrolls as required during the course of the Work shall establish final minimum wage rate certification of all work sublet, assigned, or otherwise disposed of in any manner during completion of the Contract. Truck owner-operators are not subject to the wage rates prescribed by the Department of Labor. Such owner-operators shall be listed on payrolls with the notation "Truck Driver owner-operator" in the Work Classification column.. Neither the hours worked nor wages paid need to be shown.

The Department will furnish copies of the Required Contract Provisions, notices, report forms, certification acknowledgments and subcontract transmittal requests to the apparent low bidder following bid openings.

Transmittal requests shall indicate either subcontract work or lower tier subcontract work and shall include a copy of the subcontract agreement attached to a certification that all required Contract provisions, notices and report forms are a part of each subcontract.

If, during the course of the Work, a Subcontractor or Lower-tier Subcontractor fails to complete, perform satisfactory work, or does not receive consent to work by the Department, the Contractor shall complete the Work with or without another approved subcontractor. The Contractor shall not substitute another subcontractor for an approved subcontractor except for reasons acceptable to the Department nor

## SECTION 108

shall an approved subcontractor be allowed to perform work not prescribed in the executed agreement on file without prior consent by the Department.

Payment for Contract work performed by individuals or firms not authorized as subcontractors will be subject to their inclusion on the Contractor's payroll.

**108.02 Notice to Proceed.** The Notice to Proceed will stipulate the date on which it is expected the Contractor will begin the construction and the date from which Contract Time will be charged. Commencement of work by the Contractor, prior to the Notice to Proceed, shall constitute the beginning of construction and the date from which Contract Time will be charged.

### **108.03 Pre-Construction Activities.**

Prior to commencement of any major work on the Project, a pre-construction conference shall be held to outline the proposed project schedule and coordinate the Work of the Contractor, various utilities, and subcontractors. The Contractor shall be prepared to discuss in detail the proposed schedule; the Storm Water Pollution Prevention Plan (SWPPP) and the traffic control plan particularly as these relate to coordination with schedules of the utilities and subcontractors. In addition, the Contractor shall be prepared to provide details on the sources and delivery of critical materials.

The Contractor shall submit a written Storm Water Pollution Prevention Plan (SWPPP), and a traffic control plan (if required) to the Engineer for approval in accordance with 105.02. The Contractor shall also submit a progress schedule to the Engineer for documentation in accordance with 105.02.

**A. Progress schedule.** Sufficient materials, equipment and labor shall be provided by the Contractor to guarantee completion of the project within the Contract Time. The progress schedule will be used to establish the critical construction operations and to monitor the progress of the Work. No work shall proceed on the project, other than mobilizing, installation of the permanent construction signs, and installing the field office, until the progress schedule has been submitted.

The progress schedule shall be, at a minimum, a chronologically sequenced bar chart showing major construction activities, project phasing, controlling activities, project required milestones, activity durations by working day or calendar day, and project suspensions that are 3 days or longer. Major activities shall include activities such as installation of cofferdam, excavate bridge footing, pave top at areas designated, etc. Subcontractor work, utility work, submission of any working drawings including the review periods indicated in 105.02 for each submission, and manufacturing of key components shall be included as major activities. Controlling activities shall be determined by the Contractor as those activities that, if delayed, would delay project completion. Milestones shall include the start of the project, winter suspensions if planned, project intermediate and final completion dates. All work shall be scheduled to be completed by or prior to project required milestones. No claim for compensation related to loss of time other than as provided for in 104.02, 104.03, and 104.04 will be considered by the Department.

The Contractor shall submit a new schedule, when required to reflect actual project conditions. The revised schedule shall show completion of the Work within the Contract Time and the Contractor shall modify operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the Work be discontinued for any reason, the Contractor shall notify the Engineer at least three working days in advance of resuming operations.

**B. Storm Water Pollution Prevention Plan (SWPPP).** The SWPPP shall detail the methods planned for accomplishment of temporary and permanent erosion control work for operations including, but not limited to, clearing, grubbing, grading, drainage, and bridge operations, especially in or adjacent to existing waters, water courses, or wetlands. The SWPPP shall include proposed methods of erosion control on haul roads; borrow pits, and disposal areas.

**C. Traffic Control Plan.** The traffic control plan shall include the Contractor's detailed plan for controlling traffic through the Project and shall be in conformance with the MUTCD and other applicable standards. This plan shall include specific design details on lane closures, detours, and temporary bridges. The plan shall also include the layout of signing, barricades, and other warning devices, as well as the placement of flaggers and uniformed officers. If the Contractor does not submit a traffic control plan for approval, it will be presumed that the Contractor plans to adhere to the Traffic Control Plan contained in the Contract. Changes to the approved traffic control plan shall be submitted to the Engineer for review and approval at least fifteen working days in advance of implementation of the change.

**108.04 Limitation of Operations.** Construction operations shall be conducted to ensure the least interference with traffic, with due regard to the location of detours and to the provisions for handling traffic. The Engineer may require the Contractor to finish a portion of the Project before work is started on any additional portions of the Project if the opening of such portion is essential to public needs.

No work shall be performed on Sundays or legal holidays as defined in Section 101 except in cases of emergency or upon written permission of the Engineer. Whenever a holiday is observed on a Friday or a Monday, the Contractor may be required to suspend work for three days. Prior to the close of work, the Project shall be placed in the best condition possible for the comfort and safety of the traveling public, and definite arrangements shall be made for responsible personnel to maintain the Project in the above condition throughout the period of suspension. No work will be permitted at night unless sufficient lighting is provided to ensure a comparable degree of accuracy, workmanship and conditions regarding safety as would be obtained in daylight.

**108.05 Character of Workers.** The Contractor shall employ sufficient resources for prosecuting all classes of work in the manner and time required by the Contract.

Workers shall have sufficient skill and experience to properly perform their assigned work. Workers engaged in work requiring special skills shall be sufficiently knowledgeable and experienced in the work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any Subcontractor who, in the opinion of the Engineer, does not perform the Work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed from the Work, and shall not be employed again in any portion of the Work without the approval of the Engineer.

Should the Contractor or Subcontractor fail to remove the person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the Work, the Work may be suspended by written notice until the Engineer's orders are followed.

**108.06 Methods and Equipment.** All equipment used on the Project shall be of sufficient size and mechanical condition to meet the requirements of the Work and to produce a satisfactory quality of work. Equipment used shall not cause injury to the roadway, adjacent property, or other highways.

If equipment is not maintained in full working order or, as used by the Contractor, proves inadequate to obtain results prescribed, the Engineer may order said equipment to be improved or other equipment substituted or added.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the Contract, the Contractor is free to use any methods or equipment that will accomplish the Work.

Where practicable, spray applications of materials containing fertilizer, asphalt, and other injurious substances which cause pitting or which impair the reflective and brightness values of metal shall precede the installation of susceptible roadside structures such as signs, sign supports, and guardrail; otherwise, coverings shall be used to protect such structures installed prior to the spray applications.

Failure on the part of the Contractor to observe the necessary precautions to prevent damage to property or injury to persons shall be sufficient grounds for suspension of the Work.

## SECTION 108

When the methods and equipment to be used are specified, other methods and equipment shall not be used unless requested in writing by the Contractor and approved by the Engineer. The request shall include a description of the methods and equipment proposed and the reasons for making the change. If approval is given, the Contractor shall be responsible for producing work meeting the Contract requirements. If the Engineer determines that the work produced does not meet Contract requirements, the use of the substitute methods or equipment shall be discontinued and the remaining Work shall be completed with the specified methods and equipment. Deficient work shall be removed and replaced or repaired to the specified quality by and at the Contractor's expense. No change will be made in basis of payment for the construction items involved nor in Contract Time as a result of approving a change in methods or equipment.

**108.07 Determination of Compensation and Contract Time Extension for Excusable, Noncompensable and Compensable Delays.** The number of days allowed for completion of the Work or the completion date will be stated in the Proposal and Contract and will be known as the Contract Time. It is an essential part of the Contract that the Contractor perform fully, entirely, and in an acceptable manner, the Work under the Contract within the Contract Time. It is likewise essential that those parts, phases, or stages, as stipulated in the Contract, for the purpose of benefiting the traveling public or for the coordination of work performed by others, shall be completed on the date indicated. An extension of the Contract Time may be granted by the Department under the conditions specified in (A) and (B) of this subsection provided documentation has been given to the Contract Administrator as specified under (C), (D), and (E) of this subsection. Strict adherence to the provisions of this section is necessary for the Engineer's consideration of an extension of Contract time because of project delays.

No allowances will be made for delays or suspensions of the Work due to the fault of the Contractor.

When the Contract sets forth a calendar completion date, due consideration will have been given to the Saturdays, Sundays, legal holidays, and the period between December 1 and April 1 inclusive in the anticipated period of construction. No extension of the Contract completion date will be allowed due to such days. When the Contract stipulates a completion date that falls on a Saturday, Sunday, or legal holiday, and when the time as extended by the Engineer falls on a date that is a Saturday, Sunday, or legal holiday, the date will be extended to the next working day. Consideration will be given for unfavorable weather or ground conditions on days other than the above days as follows: For each day on which weather or ground conditions prevent the Contractor from effective prosecution of the operations which at that time control the progress of the work, from the latest date for starting operations until the completion date as extended, an extension of one working day will be added to the Contract Time. Working days will also be added when the final Contract amount is greater than the original Contract Bid (Total), computed as follows: The ratio of the number of extra allowable working days to the number of working days between the date of beginning of work and the contract completion date (not counting the period December 1 through April 1) is the same as the ratio of the final Contract amount less the original Contract Bid (Total) to the original Contract Bid (Total).

$$\frac{\text{Extra Allowable Working Days}}{\text{Original Allowable Working Days}} = \frac{\text{Final Contract Amount} - \text{Original Contract Bid (Total)}}{\text{Original Contract Bid (Total)}}$$

If the Contract Time established is based on working days, the Engineer will furnish a weekly statement showing the number of working days charged for the preceding week and the number of working days remaining for completion of the Contract. The Contractor will be allowed one week to file a written protest setting forth the reasons the Engineer's weekly statement is incorrect, otherwise the statement will be considered accepted by the Contractor. An increase of quantities will increase the number of allowable working days by the ratio of the final Contract amount to the original Contract Bid (Total).

- A. Excusable or Noncompensable Delay. Contract time allowed for the performance of the Work may be extended for delays caused by natural disasters, acts of the public enemy, fires, floods,

epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, unfavorable ground conditions (e.g., surfaces too wet for normal travel, material encountered outside of workable moisture conditions, ground too wet or too cold to apply surface treatment or pavement, and the like), utility relocations, right-of-way problems, extra work of added complexity or ordered done at a late or unfavorable stage of construction, work requiring the use of specialists for whose starting time a reasonable latitude must be allowed, delays or suspensions made necessary by an emergency episode procedure carried out under the direction of the New Hampshire Department of Environmental Services, Division of Air Resources, or delays not caused by the Contractor's fault or negligence. The Contractor's contention that insufficient time was specified is not a valid reason for extension of time.

- B. **Compensable Delay.** Contract time allowed for performance of the Work may be extended for delays caused by the Department. The Contractor may be granted an extension of time and additional compensation.
- C. **Notification of Delay.** Within five days of the occurrence of a delay to the prosecution of the work, the Contractor shall notify the Contract Administrator in writing of such delay and indicate that a request for delay consideration will be filed with the Department. The request for delay consideration shall set forth the reasons justifying the granting of the request.
- D. **Procedures Following Notification of Delay.** After notifying the Contract Administrator of the request for delay consideration, the Contractor shall keep daily records of all non-salaried labor, material costs, and equipment expenses for all operations that are affected by the delay.

The Contractor shall maintain a daily record of each operation affected by the delay and the station location(s) of the operations affected. Daily records of the operations and stations will also be maintained by the Department. Each Monday, the Contractor shall compare the previous week's daily records with the records kept by the Department. The Contractor shall also prepare and submit written reports to the Contract Administrator containing the following information each Monday:

- 1. Number of days behind schedule.
- 2. A summary of all operations that have been delayed, or will be delayed.
- 3. In the case of a compensable delay, the Contractor shall explain how the Department's act or omission delayed each operation, and estimate the amount of time required to complete the Project.
- 4. Itemize all extra costs being incurred, including:
  - a. How the extra costs relate to the delay and how they are being calculated and measured;
  - b. The identification of all non-salaried Project employees for whom costs are being compiled; and
  - c. A summary of time charges for equipment, identified by manufacturer's number for which costs are being compiled.

Provide written notice to the Engineer within ten days of the results of the comparison of the detailed reports performed each Monday and define any disagreements between specific records.

Failure to meet to review the Department's records or to report disagreements between the records will be considered conclusive evidence that the Department's records are accurate. Delay costs allegedly incurred prior to notifying the Contract Administrator that operations have been delayed will not be allowed.

- E. **Procedures Following Completion of Work Allegedly Delayed.** Within 15 days of Completion, or phase of work allegedly delayed, the Contractor shall submit a report to the Contract Administrator containing the following information:
  - 1. A description of the operations that were delayed and the documentation and explanation of the reason for the delay, including all reports prepared for or by the Contractor; and
  - 2. An as-built chart, or other graphic depiction of how the operations were delayed; and

## SECTION 108

3. An item-by-item measurement and explanation of extra costs requested for reimbursement due to the delay.

A written decision will be provided to the Contractor within 60 days of the receipt of the Contractor's submission.

In the case of compensable delays, if the Engineer determines that the Department is responsible for delays to the Contractor's operations, the Engineer's written decision will reflect the nature and extent of any resulting equitable adjustment to the Contract.

When an extension of the Contract Time is requested due to delays in the delivery of critical materials, sufficient documentary evidence must be furnished to the Department at the time the delay occurs showing that such delay results from the materials being unavailable by reason of an unusual market condition such as an industry-wide strike, natural disaster, or area-wide shortage which arises after bids are taken and which prevents the procurement of materials within the allowable time of limitations. Delays due to slow delivery from a source of supply when the required material is available elsewhere will not be considered as justification for an extension of time.

The Contract Time may be increased due to an increase in quantities as specified above, if it can be definitely established that any required additional work is of such character or occurs so near the completion of the Contract Time that more time is required to complete the Work than is indicated by the proportionate money value.

In the event that the Engineer extends the Contract Time into a period of the year during which the working conditions are less favorable, consideration will be given to further extension of time as influenced by the nature of the work involved.

When the Engineer determines that the Contract Time should be extended, such extended Contract Time shall then be in full force and effect as though it were the original Contract Time.

**108.08 Incentive/Disincentive for Early Completion.** If it is in the public's interest to complete the Project, or portion of the Project, in a minimal time frame, an incentive/disincentive Special Provision will be included in the Contract detailing applicable dates and work stages covered by the Special Provision.

For each calendar day the Project, or portion of the Project is completed as specified in the Special Provision before or after the date established in the Contract, payment will be increased or decreased by the amount established in the Special Provision.

The Engineer will determine when the work stage or Project, or portion of the Project, is complete as specified in the Special Provision.

108.09 relating to liquidated damages remains in effect and is applicable to the total Contract Time; however, there will not be concurrent assessment of liquidated damages with disincentive assessments. If there are concurrent assessments against the Contractor the larger sum will prevail.

The Contractor shall be paid the amount of incentive, as it is earned, in the progress payment schedule. The Engineer shall deduct the amount of disincentive, as it occurs, in the progress payment schedule.

Should the amount of disincentive and/or liquidated damages, exceed the amount of the final estimate for work performed, and not paid for, the Contractor shall submit a check to the Department in the amount of the difference within 30 days of notice that payment is due.

Under an incentive/disincentive Special Provision, no time extension will be granted for labor disputes or delays in material deliveries unless it can be shown that such delays are industry wide.

**108.09 Failure to Complete on Time.** For each calendar day or work day that work remains uncompleted after the Contract Time, the sum specified below will be deducted from any money due the Contractor. This sum shall not be considered and treated as a penalty but as liquidated damages due the Department by reason of inconvenience to the public, added cost of engineering and supervision, and other extra expenditures of public funds due to the Contractor's failure to complete the Work on time. Any adjustment of the Contract Time for completion of the Work granted under the provisions of 108.07 will be considered in the assessment of liquidated damages.

## SECTION 108

In the case of a date in the Contract being given for the completion of parts, phases, or stages, the liquidated damages will be deducted for the period in which that particular work specified is uncompleted.

Permission for the Contractor or Surety to continue and finish work after the Contract Time and approved extensions have elapsed shall not waive the Department's rights under the Contract.

The assessment of all or any of the liquidated damages that accrue may be terminated if the Department has determined that the Work is substantially complete and is in a condition for safe and convenient use by the traveling public.

The Work will be considered substantially complete when all necessary signing, striping, guardrail, and other safety appurtenances have been installed. For projects that will not be opened to the traveling public, the Contract will be considered substantially complete when it is ready for the subsequent project. This shall not be construed as a contractual right and its application will be contingent upon the Contractor's diligence in completing the remaining items of work.

Liquidated damages shall be assessed in accordance with the following schedule:

<u>Original Contract Amount</u>		<u>Daily Charge</u>	
From more than	To and including	Calendar Day	Working Day
\$ 0	\$ 25,000	\$ 135	\$ 200
25,000	50,000	165	250
50,000	100,000	265	400
100,000	500,000	300	450
500,000	1,000,000	535	800
1,000,000	2,000,000	800	1200
2,000,000	5,000,000	1065	1600
5,000,000	10,000,000	1335	2000
10,000,000	----	1600	2400

When the Contract Time is on the calendar date basis, the schedule for calendar date shall be used. When the contract time is on a working day basis, the schedule for working days shall be used.

When Acceptance has been made by the Engineer as prescribed in 105.17, the daily charge will no longer be assessed.

Should the amount of money otherwise due the Contractor be less than the amount of such liquidated damages, the Contractor and the Surety shall be liable to the State for such deficiency.

The Engineer has the right to deduct the amount of anticipated liquidated damages against the Contractor from any estimated payment for Work performed under the Contract; or to claim and recover such sums by process of law. Review of anticipated Contract completion and potential liquidated damages will commence when 80% of the original Contract time has elapsed.

**108.10 Default of Contract.** The Engineer may declare the Contract in default to the Contractor and the Surety advising them of the actions required for remedy if the Contractor:

- A. Fails to begin the Work under the Contract within the time specified in the Notice to Proceed, or
- B. Fails to perform the Work with sufficient resources to ensure the timely completion of the work, or
- C. Fails to perform the Work in accordance with the Contract requirements or neglects or refuses to remove and replace rejected materials or unacceptable work, or
- D. Discontinues the prosecution of the Work, or
- E. Fails to resume work which has been discontinued, within a reasonable time after notice to do so, or
- F. Becomes insolvent, is declared bankrupt, or commits any act of bankruptcy or insolvency, allows any final judgment to remain unsatisfied for a period of ten days, makes an assignment for the benefit of creditors, or

## SECTION 108

- G. Fails to comply with Contract requirements regarding minimum wage payments or EEO requirements, or
- H. Is a party to fraud.

The Engineer will give notice in writing to the Contractor and the Surety of such delay, neglect, or default.

If the Contractor or Surety does not proceed in accordance with the notice within ten days of receipt, the Department has full power and authority, without violating the Contract, to take the prosecution of the Work from the Contractor. The Department may appropriate or use Materials at the Project site and enter into an agreement with another Contractor for the completion of the Work remaining. Acceptable materials obtained by the Contractor for use on the Project and not yet included in the Work, may be purchased by the Department from the Contractor at actual costs.

The methods used for completion of the Contract will be determined by the Department.

All costs and charges incurred by the Department, as a result of the delay, neglect, or default, including the cost of completing the Work under Contract, and any applicable liquidated damages or disincentives will be deducted from moneys due the Contractor for completed work. If such costs exceed the sum that would have been payable under the Contract, the Contractor and Surety shall be liable and shall pay the Department the balance of such costs in excess of the Contract price.

If it is determined, after termination of the Contractor's right to proceed, that the Contractor was not in default, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Department under 108.11. Thus, damages to which a Contractor may be entitled as a result of the improper default termination will be limited to appropriate amounts for the items listed in 108.11.

**108.11 Termination of Contract for the Convenience of the Department.** The Department may, with the concurrence of the Governor and Executive Council, and with the approval of the FHWA where applicable, terminate the entire Contract or any portion thereof, if the Engineer determines that a termination is in the Department's interest. The Engineer will deliver to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

- A. Submittals and Procedures. After receipt of a Notice of Termination, the Contractor shall immediately proceed with the following obligations:
  - 1. Stop Work as specified in the notice.
  - 2. Place no further subcontracts or orders or materials, services, or facilities, except as necessary to complete the continued portion of the Contract.
  - 3. Terminate all subcontracts to the extent they relate to the Work terminated.
  - 4. Settle all outstanding liabilities and termination settlement Proposals arising from the termination of purpose of this clause.
  - 5. Transfer title and deliver to the Department (1) the fabricated, partially fabricated, or unfabricated parts, Work in process, completed Work, supplies, and other material produced or acquired for the Work terminated, and (2) the completed or partially completed plans, drawings, information, and other property that, if the Contract had been completed, would be required to be furnished to the Department.
  - 6. Complete performance of the Work not terminated.
  - 7. Inventory acceptable Materials obtained by the Contractor for the Project that have not been incorporated in the Work in conjunction with the Engineer at a date identified by the Engineer.
  - 8. Take any action necessary, or that the Engineer may direct, for the protection and preservation of the property related to the Contract that is in the possession of the Contractor and in which the Department has or may acquire an interest.
- B. Settlement Provisions. When the Department orders termination of all or a part of the Contract effective on a certain date, completed items of Work as of the date will be paid for at the Contract bid price. Payment for partially completed Work will be made either at agreed prices



or under the provisions below. Items that are eliminated in their entirety by such termination shall be paid for as provided in 109.05.

1. **Additional Costs.** Within 60 days of the effective termination date, the Contractor shall submit a claim for additional damages or costs not covered above or elsewhere in the Contract. Such claim may include such cost items as reasonable idle equipment time, mobilization efforts, bidding and project investigative costs, overhead expenses attributable to the Project terminated, accounting charges involved in claim preparation, Subcontractor costs not otherwise paid for, actual idle labor cost if Work is stopped in advance of termination date, guaranteed payments for private land usage as part of the original Contract, and any other cost or damage for which the Contractor feels reimbursement should be made. Anticipated profits will not be considered as part of any settlement.

The Contractor and the Department may agree upon the whole or any part of the amount to be paid because of the termination. The amount may not exceed the total Contract price reduced by the amount of payments previously made, and the Contract price of Work not terminated. The Contract shall be amended, and the Contractor paid the agreed amount.

2. **Additional Cost Review.** If the Contractor and the Department fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Department will pay the amounts determined as follows, but without duplication of any amounts agreed upon above:
  - a. For Contract Work performed before the effective date of termination, the total (without duplication of any items) of:
    1. The cost of Work performed;
    2. The cost of settling and paying termination settlement Proposals under terminated subcontracts that are properly chargeable to the termination portion of the Contract if not included in subparagraph 1 above; and
    3. A sum, as profit on (1) above determined by the Department to be fair and reasonable. The Department shall allow no profit under this subdivision if the Contractor's costs incurred on work performed exceed the bid item payments made.
  - b. The reasonable costs of settlement of the work terminated, including:
    1. Accounting, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and support data;
    2. The termination and settlement of subcontracts (excluding the amounts of such settlements); and
    3. Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.
  - c. Except for normal spoilage, and to the extent that the Department expressly accepts the risk of loss, the Department will exclude from the fair value, all that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Department or to the buyer.
  - d. In arriving at the amount due the Contractor under this clause, there will be deducted -
    1. All unliquidated advance or other payments to the Contractor under the terminated portion of the Contract;
    2. Any claim that the Department has against the Contractor under the Contract; and
    3. The agreed price for, or proceeds from the sale of Materials, supplies, or other things acquired and sold by the Contractor not recovered by or credited to the Department.

## SECTION 108

If the termination is partial, the Contractor may file a proposal with the Department for an equitable adjustment of the price(s) of the continued portion of the Contract. The Department will make any equitable adjustment agreed upon. Any proposal for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Engineer.

The Department may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the Contract, if these payments will not exceed the amount to which the Contractor is entitled.

The Contractor shall maintain and make available all project cost records to the Department for audit to the extent necessary to determine the validity and amount of each item claimed. This includes all books and other evidence bearing on the Contractor's costs and expenses under the Contract. These records and documents shall be made available to the Department at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Department, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

Termination of the Contract or portion thereof shall not relieve the Contractor of contractual responsibilities for the Work completed, nor shall it relieve the Surety of its obligation for and concerning any just claims arising out of the Work performed.

**108.12 Termination of Contractor's Responsibility.** Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the Work have been approved and accepted, the Contractor shall then be released from further obligations except as set forth in his bond and as provided in 107.14.

**108.13 Understanding of Parties Regarding Department's Performance.** It is understood and agreed by the parties to the Contract that all obligations of the Department hereunder, including the continuance of payments, are contingent upon the appropriation and continued availability of State and Federal funds, and in no event shall the Department be liable for any payments hereunder in excess of such appropriated and available funds. In the event the General Court or any of its Committees orders the reduction of expenditures of State funds and the Governor and Council fails to encumber funds or reduces or terminates the expenditure of anticipated funds or appropriations relative to the Contract, the Department may, by written notice to the Contractor, immediately terminate the Contract in whole or in part in accordance with the applicable provisions of 108.11.

## ***SECTION 109 -- MEASUREMENT AND PAYMENT***

**109.01 Measurement of Quantities.** Work completed under the Contract will be measured by the Engineer according to the United States customary measure or metric system, as specified for the Contract. The units of the two systems are not equal and therefore not interchangeable within a Contract.

A station, when used as a definition or term of measurement, will be 100 linear feet (100 meters) measured horizontally.

The method of measurement and computations to be used in determination of quantities of material furnished and work performed will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual objects having an area of 9 square feet (1 square meter) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing.

Structures will be measured according to neat lines shown on the plans or as ordered to fit field conditions.

Items which are measured by the linear foot (meter), such as pipe culverts, guardrail, curb, underdrains, etc., will be measured parallel to the base or foundation upon which such structures are placed.

In computing volumes of excavation, embankment, and borrow, the average end area method will be used. Where it is impracticable to measure material by the cross-section method due to irregular, isolated deposits, acceptable methods involving three-dimensional measurement may be used. When measurement of materials in vehicles is permitted, the quantity will be determined as 80 percent of the loose volume.

In computing volumes of concrete and masonry, the prismatic method will be used.

The space occupied by pipe will not be included in the volume of headwalls. In the case of pipe having a wall thickness of 2 in (50 mm) or more, the area of the pipe will be based on the manufacturer's nominal dimensions, outside to outside, or the shell of the pipe. In the case of pipe having a wall thickness of less than 2 in (50 mm), the area of the pipe will be based on the nominal inside diameter of the pipe.

The thickness of plates and galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fractions of inches (millimeters).

The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois (1000 kilograms). Except as specified below, materials which are measured or proportioned by weight shall be weighed on scales which the Contractor has had sealed by the New Hampshire Department of Agriculture or by a company approved by that Department. All weighing shall be performed in a manner prescribed under the Rules and Regulations of the Bureau of Weights and Measures of the New Hampshire Department of Agriculture. Weighing of materials on scales located outside New Hampshire will be permitted for materials produced or stored outside the State, when requested by the Contractor. Out-of-State weighing, in order to be approved, must be performed on scales sealed by the appropriate governmental authority.

If material is shipped by rail, the car weight may be accepted, provided that payment is made only for the actual weight of material. Car weights will not be acceptable for material to be passed through mixing plants.

Trucks used to haul material being paid for by weight shall be weighed empty daily at times directed by the Engineer. Each truck shall bear a plainly legible identification mark.

When material is weighed, the individual weight slips, which shall be furnished by the Contractor, for trucks, trailers, or distributors, shall show the following information: the date, the project name and number; slip number; the material or commodity; the dealer or vendor; the Contractor or Subcontractor; the location of the scales; the time of loading; the vehicle registration number or other approved legible identification mark; the tare and net weights, with gross weights when applicable; and the weigher's name, signature or signed initials.

The right is reserved to weigh any truck, trailer, or distributor, at locations designated, before and after making deliveries to the Project.

When requested by the Contractor and approved or ordered by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed and converted to cubic yards (cubic meters). Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and agreed to by the Contractor before this method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or short 2000 lb, (ton). Volumes will be converted to weights, or weights will be converted to gallons (liters), corrected to volume at 60 °F (15.5 °C), using ASTM D 1250 for asphalts or ASTM D 633 for tars.

To assist in computing the number of short ton, 2000 lb (tons) of material required when the rate of application is specified in gallons (liters) per square yard (square meter), the following approximations may be used:

## SECTION 109

Bitumen	Gallons per Ton at 60 °F	Kilogram per Liter at 15.5 °C	Pounds per Gallon at 60 °F
RC-MC 70	248	0.965	8.05
RC-MC 250	247	0.972	8.11
RC-MC 800	244	0.980	8.18
RC-MC 3000	240	0.998	8.33
AC-10	235	1.02	8.51
AC-20	233	1.03	8.58
Emulsion	239	1.00	8.38

Each vehicle used in transporting liquid bituminous material shall be weighed before and after loading and the difference in weights used as the basis for computing pay quantities. A copy of the original weight slip shall be delivered with each truck shipment. In addition to the information required above, the following shall be shown on the slip: the plant and tank number from which the material was obtained, the grade of the material and the percent of additive, if any.

When a slip shows a "Part Load On" or indicates a "high tare", the delivery slip shall be accompanied by a copy of the delivery or weight slip from the previous load indicating the grade of material together with substantiation of the tare weight of the vehicle. If the Engineer has already been furnished the slip with the previous load, reference by slip number will satisfy the latter part of this requirement.

Liquid bituminous material delivered but not used in the Work shall be weighed and credit given by the vendor. A copy of the weight slip showing such credit shall be returned to the Engineer within three days.

Timber will be measured by the thousand feet board measure (MBM) [cubic meter] actually incorporated in the structure. Measurement will be based on nominal widths, thicknesses, and the extreme length of each piece.

The term "lump sum", when used as an item of payment, will mean complete payment for the Work described in the Contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit includes all necessary fittings and accessories.

Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the Work completed on those items.

Rental of equipment will be measured in hours of actual working time and necessary travel time of the equipment within the limits of the Project. If special equipment has been ordered by the Engineer in connection with force account work, travel time and transportation to the project will be measured. If equipment is ordered held on the property on a standby basis by the Engineer, payments will be made under 109.04.D.3.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe, conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., the identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Material wasted without authority will not be included in the final pay quantity.

When the estimated quantities for a specific portion of the Work are designated as final pay quantities in the Contract, they shall be the final pay quantities for which payment will be made in accordance with 109.11.

**109.02 Scope of Payment.** The Contractor shall receive and accept compensation provided for in the Contract as full payment for furnishing all materials; for performing work under the Contract in a complete and acceptable manner; and for all risk, loss, damage, or expense arising out of the nature or prosecution of the work, subject to the provisions of 107.14.

If the "Basis of Payment" clause relating to any unit price in the Contract requires that the unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not be measured or paid for under any other pay item appearing in the Contract.

The Contractor shall not use publicly-owned equipment on projects financed in whole or in part with federal funds except in exceptional cases where such rental may be clearly in the public interest. Public interest will be indicated to the Contractor in one of two ways: (1) when the Special Provisions suggest the possibility of renting specified equipment with the rates and points of availability or delivery of such equipment, or (2) if, during construction, an emergency should develop caused by breakdown or loss of equipment from accidents or other unforeseeable causes beyond the control of the Contractor, and the Contractor is otherwise unable to secure equipment with which to continue the work. In this emergency, publicly-owned equipment may be made available to the Contractor at rental rates agreeable between the Contractor and the Department or other public agency that owns the equipment.

**109.03 Compensation for Altered Quantities.** When the accepted quantities of work vary from the quantities in the Contract, the Contractor shall accept payment at the original Contract unit prices for the accepted quantities of work done. No allowance will be made for any increased cost except as provided in Subsections 104.02, 104.03, 104.04, 108.11 and 109.11.

**109.04 Differing Site Conditions, Changes, Extra Work, and Force Account Work.** Differing Site Conditions, changes, and Extra Work performed under Section 104 will be paid for using the following methods as appropriate:

- A. Contract unit prices.
- B. Unit prices agreed upon in the order authorizing the work.
- C. An agreed upon lump sum amount.
- D. If directed by the Department, on a force account basis to be compensated in the following manner:

1. **Labor.** For all labor, including equipment operators, and foremen in direct charge of the specific operation, the Contractor shall receive the rate of wage agreed to in writing for each and every hour that the labor and foreman are actually engaged in the work. In case the Contractor is required to pay overtime pay or holiday pay to labor engaged in the Work, such rate will be the rate reimbursed. When the Contractor is ordered to return to the project solely to perform Extra Work, labor will be considered as being actually engaged in the Work during the hours while traveling.

No part of the salary or expenses of anyone connected with the Contractor's forces above the grade of foreman and having general supervision of the Work will be included in the labor item as specified above, except under any of the following conditions: (1) The work ordered is of an emergency nature or is ordered too late to be done before all work shown on the Plans or provided for in the Proposal has been substantially accomplished, (2) the Contractor's organization is entirely occupied with Extra Work, or (3) the nature of the work is such that the services of superintendents and timekeepers may be included in the classification of labor. In order to determine the allowable rate of pay of eligible superintendents, foremen, and timekeepers, a notarized statement shall be furnished to the Engineer. In case no documentary evidence of the actual rate of pay is furnished for such superintendents, foremen and timekeepers, no reimbursement will be allowed. Transportation for a superintendent will be paid for as equipment in the manner specified in (3) below.

The Contractor will also receive an additional amount (i.e. a labor burden rate) equal to 50 percent of the actual hourly wage rate paid to, or in behalf of workers, for costs of health and welfare benefits, taxes, insurances, retirement, and union benefits. A Contractor can request a different labor burden rate be used if an independently audited breakdown of the actual aforementioned costs, prepared by a Certified Public Accountant, is provided. The audit of the burden rate shall be prepared on current

## SECTION 109

financial data and in conformity with the accounting practices prescribed by the Federal Acquisition Regulations 48 CFR, Part 31.

An amount equal to ten percent of the sum of the above items will also be paid the Contractor.

Subsistence and travel expenses paid by the Contractor will be reimbursed only when the Engineer orders Extra Work and, in order to perform such work, it is necessary to move workers to the project particularly for that operation. Such subsistence and travel expenses allowed shall be carried on the daily report form under the classification of "Material," without, however, being subject to the added percentage for materials. If work other than such Extra Work is performed by the individuals during or in connection with that operation, no subsistence or travel expenses will be allowed.

2. **Materials and Specialized Work.** When the Engineer directs special work not included in the Contract, requiring skills, tools, and equipment unlike those used by the Contractor, payment may be made for such work performed by a specialist. For specialist services, and materials accepted by the Engineer whether furnished by a specialist or by the Contractor, the Contractor will receive the actual cost, including transportation charges paid (exclusive of equipment rentals as hereinafter set forth), to which cost 15 percent will be added. Invoices not exceeding a value of two thousand dollars per work event for specialist services on the basis of the current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization.

In those instances wherein a Contractor is required to perform Extra Work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the job site, the charges for that portion of such work performed in such facility may, by agreement, be accepted as a specialist billing.

The cost of materials will be the cost to the purchaser, whether Contractor, Subcontractor, or other, from the supplier thereof, except as the following are applicable:

- a. If materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials will be deemed to be the price paid to the actual supplier as determined by the Engineer. No markup except for actual costs incurred in the handling of such materials will be permitted.
  - b. If the materials are obtained from a supply or source owned wholly or in part by the purchaser, payment will not exceed the price paid by the purchaser for similar materials furnished from said source on contract items or the current wholesale price for such materials delivered to the job site, whichever price is lower.
  - c. If, in the opinion of the Engineer, the cost of such materials is excessive, then the cost of such material will be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned delivered to the job site.
  - d. If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier, the cost will then be determined in accordance with paragraph (c).
3. **Equipment and Plant.** For any Contractor-owned machinery or special equipment (other than small tools), the use of which is approved by the Engineer, the hourly rate will not exceed that determined from the latest edition of the "Rental Rate Blue Book for Construction Equipment" published by Dataquest, Inc. used in the following manner.
    - a. The hourly equipment rental rate (R) will be determined by formula as follows:

$$R = (A \times B \times C) + D$$

Where A = Monthly rate divided by 176. The listed weekly, hourly, and daily rates will not be used.

B = Average regional adjustment factor for New Hampshire.

C = Factor from Rate Adjustment Table for the year of equipment manufacture.

D = Estimated operating costs per hour.

- b. The number of hours to be paid for will be the number of hours that the equipment or plant is actually used on a specific Force Account activity and in addition, shall include the time required to move the equipment to the location of such force account activity and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used during the move on work other than the specific Force Account activity.
- c. The current revision of the "Blue Book" applicable to the specific Force Account work is as of the beginning of the calendar year in which the Extra Work is being performed. Revised sections published during the year will not be incorporated in the "Blue Book" until the beginning of the next calendar year.
- d. The average regional adjustment factor applicable for this Contract will be specified in the Supplemental Specification for this Subsection. The average regional adjustment factor will be reviewed and revised annually subsequent to revisions of "Blue Book" sections. Equipment life adjustments will be made using the rate adjustment tables.
- e. Overtime shall be charged at the same rate indicated in subparagraph (a) above.
- f. The estimated operating costs per hour will be used for each hour that the equipment or plant is in operation on the Force Account work. Such costs do not apply to idle time regardless of the idleness.
- g. The maximum rental period to be paid for per day shall not exceed eight hours unless the equipment operates for eight or more hours.
- h. The rates established above shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhauls and maintenance of any kind, depreciation, storage, overhead, profits, insurance and all incidentals.

The Contractor shall provide the Engineer with the following: the manufacturer's name, equipment type, year of manufacture, model number, type of fuel used, horsepower rating, attachments required, together with their size or capacity, and any further information necessary to ascertain the proper rate. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer. The Contractor shall have available for the Engineer's use a revised copy of the "Blue Book" as referenced in above.

Equipment used by the Contractor shall be in good working condition and shall be of suitable size and suitable capacity required for the work to be performed. The rate for the basic equipment with the appropriate attachments shall include only the rate for the combined equipment necessary to perform the extra work. In case the Contractor elects to use equipment of a higher rental value than that suitable for the work, payment will be made at the rate applicable to the suitable equipment. The equipment actually used and the suitable equipment to be paid for will be recorded as a part of the record for Extra Work. The Engineer will determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate equipment, the rate paid for the operator will likewise be that for the suitable equipment.

## SECTION 109

Payable time periods will not include: (1) time elapsed while equipment is inoperative due to breakdowns, (2) time spent repairing equipment, or (3) time elapsed 24 hours after the Engineer has advised the Contractor that the equipment is no longer needed.

If a piece of equipment is needed that is not listed in the above stated rental rate guide, a rate will be established by the Engineer in writing before the equipment is used. The Contractor may furnish any cost data which might assist the Engineer in the establishment of such rate.

If the Contractor does not own a specific type of equipment and must obtain it by rental, the Contractor shall inform the Contract Administrator of the need to rent the equipment and of the rental rate for that equipment before using it on the work. The Contractor will be paid the actual rental for the equipment for the time that the equipment is actually used to accomplish the work, provided that the rate is reasonable, plus the cost of moving the equipment onto and away from the job. The Contractor shall provide a copy of the paid receipt or canceled check for the rental expense incurred.

Transportation charges for each piece of equipment, whether owned or rented, moved to and from the site of the work will be paid provided: (1) the equipment is obtained from the nearest approved source, (2) the return charges do not exceed the delivery charges, (3) haul rates do not exceed the established rates of licensed haulers, (4) charges are restricted to those units or equipment not already available and not on or near the Project, and (5) equipment is not used elsewhere on the project.

4. **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or for other costs for which no specific allowance is provided.
5. **Subcontracting.** For administration costs in connection with approved subcontract work, the Contractor shall receive an amount equal to five percent of the total cost of work computed as set forth above, except that no percentage will be allowed for equipment rented from the Contractor.
6. **Bond.** The Contractor will receive the actual costs for bond premium as a percentage of the total cost of the Work computed as set forth above for work paid under items not originally in the contract. The Contractor shall furnish evidence of the rate paid for such bond.
7. **Compensation.** The compensation herein provided shall be accepted by the Contractor as payment in full for Force Account work, including superintendence (except as provided in (1) above), subcontracting, taxes, bond, overhead, profit, and other costs in connection with the Work which are not provided for.
8. **Statements.** The Contractor's representative and the Engineer each day shall compare records of the cost of work completed on a Force Account basis. These daily records shall be set forth on the forms provided by the Engineer and shall thereafter be considered to be the basis for payment of the work performed, but shall not preclude subsequent adjustment based on a later audit by the Department.

No payments will be made for work performed on a Force Account basis until the Contractor has furnished the Engineer with a statement of the cost of the Force Account work showing the following:

- a. Name of subcontractor, if appropriate.
- b. Name, classification, date, daily hours, total hours, rate, and extension for each laborer, operator, and foreman.
- c. Quantities of materials, prices, and extensions.
- d. Charges for transportation of materials.
- e. Specialized work charges.
- f. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of equipment or plant.



- g. Cost of property damage liability, and worker's compensation insurance premiums, unemployment insurance contributions, and social security.

The Contractor shall certify that the labor, materials, and equipment listed were actually used on the Force Account Extra Work described, that the labor and equipment were used for the hours indicated, and that the rates for labor do not exceed those for comparable labor currently employed on the project.

Statements shall be accompanied and supported by certified copies of the appropriate payrolls, and invoices for all materials and specialized work and for transportation charges. If materials used on the Force Account work are not specifically purchased for the work but are taken from the Contractor's stock, the Engineer shall be furnished an affidavit certifying that the materials were taken from stock, that the quantity claimed was actually used, and that the price and transportation claimed represents the Contractor's actual cost.

During the life of the Contract and for a period of not less than three years after the date of Acceptance thereof, the Contractor's cost records pertaining to work paid for on an Extra Work basis shall be open to inspection or audit by representatives of the Department, and the Contractor shall retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor shall make every reasonable effort to ensure that the cost records of such other forces will be open to inspection and audit by representatives of the Department on the same terms and conditions as the cost records of the Contractor.

**109.05 Eliminated Items.** Should any items contained in the Contract be found unnecessary for the proper completion of the work, the Engineer may eliminate the items without invalidating the Contract. When notified of the elimination of items, the Contractor will be reimbursed for actual work done and all costs incurred, including mobilization and materials before notification.

**109.06 Progress Payments.** Progress payments will be made at least once each month as the work progresses. Progress payments may be prepared twice each month by the Engineer. Payments will be based on estimates prepared by the Engineer for the value of the work performed and materials placed under the Contract and for materials in accordance with 109.07 or 109.08.

No progress payment will be made when the total value of the work done since the last estimate amounts to less than \$1,000.00.

No moneys, payable under the Contract or any part, except the estimate for the first month or period, shall become due and payable, if the Engineer so elects, until the Contractor satisfies the Engineer that the Contractor has fully settled or paid for all labor performed or furnished, for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power, tools, hardware, and supplies purchased by the Contractor and used in carrying out said Contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said Contract. The Engineer may pay any and all such bills, in whole or in part, and deduct the amount so paid from any monthly or final estimate, excepting the first estimate.

**109.07 Payment For Material on Hand.** Partial payments may be made for materials to be incorporated in the work, provided the materials meet the requirements of the Contract and are delivered on, or in the vicinity of, the Project site and stored in acceptable places. Partial payments will not exceed 90 percent of the Contract unit price for the item or the amount supported by copies of paid invoices, freight bills, or other supporting documents required by the Engineer. The quantity paid will not exceed the corresponding quantity estimated in the Contract.

No partial payment will be made on living or perishable materials until incorporated in the work.

When material payments exceed \$100,000.00 or 10 percent of the total contract amount, whichever is less, notarized copies of paid invoices or copies of canceled checks for all such materials must be submitted to the Engineer within 45 days of the end date of the estimate on which the material allowance

## SECTION 109

was paid. Failure to provide such documentation will result in the deduction of such material allowance from future estimates until documentation is provided.

**109.08 Payment For Material Not on Hand.** Upon receipt of a written request by the Contractor, partial payment may be made for acceptable, fully-fabricated, nonperishable materials not delivered that are unique to the Project provided the materials meet the requirements of the Contract and are stored in excess of 30 days at locations approved by the Engineer, preferably within the State of New Hampshire, and provided all required certificates of compliance, mill test reports, shop inspector's acceptance and any other required materials certification have been furnished. Though not fully fabricated, an exception may be allowed for payment for structural steel plate, beams, bearing piles and reinforcing provided per Items 550.1x, 510.61x, and 544; partial payment for these items may be made as stipulated below. Materials shall be identifiable and accessible for inspection. Storage areas shall provide adequate protection so that such materials will meet the Contract requirements upon delivery to the site.

Partial payment will be based on the actual cost to the Contractor as indicated on invoices furnished to the Engineer. Notarized copies of paid invoices or copies of canceled checks for all such materials must be submitted to the Engineer within 45 days of the end date of the estimate on which the material allowance was paid. Failure to provide such documentation will result in the deduction of such material allowance from future estimates until documentation is provided.

Payment shall not exceed 90 percent of the bid price. No payment will be made on materials for any item in the contract whose total dollar value is less than \$5,000. Approval of partial payment will not constitute final acceptance of the materials for use in completing items of work.

**109.09 Payments to Subcontractors.** Within 21 days of the issuance of progress payments, the Contractor shall pay, in full, all subcontractors and suppliers for the value of satisfactorily completed work and materials placed under the contract and for materials in accordance with 109.07 or 109.08 paid for in the progress payments. If the Contractor withholds any portion of payment from a subcontractor, the Contractor shall, within the same timeframe, demonstrate to and obtain acknowledgement from the NH DOT Compliance Review Officer that the Contractor has reasonable cause that the subcontractor failed to satisfactorily complete work, or portions thereof; or that the supplier failed to provide materials as specified above. When the Contractor is found in noncompliance with this specification, sanctions will be imposed as determined by the Department.

For purposes of this Section, satisfactorily completed means:

The subcontractor has fulfilled the contract requirements of the Prime Contractor including the submission of all documentation required by the Specifications and the subcontract.

**109.10 Acceptance and Final Payment.** When the project has been accepted as provided in 105.17 and 107.14 and upon submission by the Contractor of all required reports, completed forms, and certifications, the Engineer will prepare the final estimate of the Work performed. The Contractor may be required to certify that all bills for labor and material used under this Contract have been paid.

If the Contractor accepts the final estimate or files no claims or objections to the quantities therein within 60 days of receiving the final estimate, the Department will process the estimate for final payment. Upon acceptance of the final estimate by the Contractor or after the 60 day waiver of claims, payment will be made for the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the Contract.

If the Contractor files a claim under the Contract requirements, it shall be submitted in accordance with 105.18. Upon review or final adjudication of the claim, any additional payment determined to be due the Contractor will be placed on a supplemental estimate and processed for payment.

All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

**109.11 Final Pay Quantity.** When an item of work is designated as a final pay quantity in the Method of Measurement, or Basis of Payment, or Bid Schedule as (F), the estimated bid quantity for that item of work shall be the final pay quantity, unless the dimensions of any portion or the quantity of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion or the quantity of the item are revised, and the revision results in an increase or decrease in the estimated quantity of that item of work, the final pay quantity for the item will be revised in the amount represented by the changes in the dimensions or the quantity. If a final pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.

The estimated quantity for each item of work designated as a final pay quantity in the Method of Measurement or Basis of Payment or Bid Schedule shall be considered as approximate only, and no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the plans, will equal the estimated quantity. No adjustment will be made in the event that the quantity based on computations does not equal the estimated quantity except under the following conditions:

- a. A quantity adjustment (increase or decrease) to the estimated bid quantity will be made if either the actual quantity is more than 125 percent or less than 75 percent of the estimated bid quantity for roadway items, or the value of the actual quantity is more than or less than \$10,000.00 of the estimated bid quantity value.
- b. A quantity adjustment (increase or decrease) to the estimated bid quantity will also be made if either the actual quantity per bridge structure is more than 125 percent or less than 75 percent of the estimated bid quantity for that bridge item or the value of the actual quantity is more than or less than \$10,000.00 of the estimated bid quantity value.

The Contractor may review the computations of final pay quantity items at the Department of Transportation in Concord. The computations requested will be available within one Working Day after a request is received by the contact person stated in the Invitation for Bids.

In case of discrepancy between the quantity shown in the Bid Schedule for a final pay item and the quantity or summation of quantities for the same item shown on the plans or in the proposal, payment will be based on the quantity shown in the Bid Schedule.